MISSION ARCHITECTVRE

EXAMPLIFIED IN SAN XAVIER DEL BAC

PRENT DUELL

MISSION ARCHITECTURE

AS EXAMPLIFIED IN SAN XAVIER DEL BAC

INCLUDING A COMPLETE LIST OF THE MISSIONS IN THE SOUTHWEST; ALSO A BIBLIOGRAPHY OF THE MANUSCRIPTS AND WORKS PERTAINING TO THE SUBJECT

BY

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TO MY MOTHER

PREFACE.

SOMEONE has said that the ignoring of an author's preface is very much like appearing indifferent upon an introduction to the author himself; however that may be, if you are so generously polite or, perhaps, so negligent of time as to be reading these few words, let me take this opportunity of cautioning you beforehand that this is one of the first works really to attempt the analysis and study of mission architecture. The field is practically unknown and there is no precedent to follow.

However, since the beauties and charm of mission architecture have become more widely known, a great need has been experienced among architects during the last few years for accurate drawings and descriptions of the best types of missions. Few architects of today can afford to devote the time necessary to making such drawings and studies, and I deem myself fortunate that peculiar conditions have allowed me a year of leisure, which I unhesitatingly devoted to such study.

I trust I have done well in selecting for study the greatest and finest of the missions, San Xavier del Bac. It is a Mission not generally known, and never before have any plans been drawn from it. For that matter, scarcely any of the missions have been studied to any great extent' although something has, at times, been written about them, especially the California "Chain"; but even in this case more with a view to general description, concerned with little or no architectural or archaeological study.

As architecture and not history is the motif of the book, I have reviewed no original manuscripts, but rather trusted

to recognized literal translations. Much historical data, directly relating to San Xavier, has been derived from the partial translation of Kino's "lost" manuscript, which was lately rediscovered by Dr. Herbert E. Bolton of the University of California. Besides, I enjoyed the rare privilege of going over the two original registers of San Xavier, used by each padre in turn, covering a period of almost two hundred years.

To the Right Reverend Henry Granjon, Bishop of Tucson, I am deeply indebted both for his permission to study and work in the mission, and for his kind assistance in studying its history. To Dr. George Wharton James, who has been a great inspiration, I wish to express thanks for his help with the work in general; also to Mr. Henry O. Jaastad, the architect, who has rendered me valuable service in many ways. It has been my good fortune to do much of this work in a university atmosphere and I hasten to acknowledge my indebtedness to Professor Byron Cummings, Professor L. A. Waterbury, Dr. Frank C. Lockwood, Dr. R. H. Forbes and Dr. A. E. Douglass, all of the University of Arizona. Their kind interest and help did much towards the accomplishment of this work.

PRENT DUELL.

TUCSON, ARIZONA,
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The old pictures of San Xavier are from the Albert Buehman Collection.

San Xavier del Bac as it stands to-day.

PREAMBLE.

In our assiduous study of the history of the Thirteen Colonies, the generals of the Revolution and the soldiers of Valley Forge,—all legitimate and necessary,—we are apt to ignore the conditions on the other side of the continent. To be sure, the incidents of our history at that time are not directly connected; but it would be well if the student knew the contemporary events of history in connection with his own country, especially at a time of such significance that it determined the history of years to come. We may consider the noble soldiers of Valley Forge and the intrepid padres of the Southwest, each oblivious of the other, in their separate way moulding what was destined to be joined into one great united nation. It would be well if the young student of American history, engrossed with the barefoot and shivering soldiers of Valley Forge, might also have his attention directed to the pious padres tramping across the scorching desert with blistered feet and without the sight of running water for days at a time.

In many cases, the priests chosen for such work were carefully selected from among the best the colleges afforded; and Father Kino, of whom further mention will be made, was on the faculty of Ingolstadt College and world-renowned as a scholar before he entered the Jesuit Order and gave his life to the mission cause.

"If God our Lord is pleased that you find any large town where it seems to you that there is a good opportunity for establishing a convent, and of sending religious men to be employed in the conversion, you are to advise me by Indians, or to return in person to Culiancan. With all

secrecy you are to give notice, that preparations be made without delay, because the service of our Lord and the good of the people of the land is the aim of the pacification of whatever is discovered." Such was the simple farewell to the meek son of Francis of Loyola from his Vicar-General. Then he departed into the great desert, with the Cross and Rosary, bent on the destruction of idols and the conquest of souls. But seldom was he seen again. The missions mark his path and labors among the Indians, and even today, in the quiet of the ruins, his very presence is felt, breathing a blessing.

The borders of "New Spain" or "El Nuevo Reino del San Francisco," as Father Marcos de Niza called it, were in no way fixed, but the general field of activities comprised, besides Mexico and Lower California, much of what is now California, Arizona, New Mexico and Texas. In this work we are particularly interested in the territory then known as Pimeria Alta, which comprised the northern part of Sonora and the southern part of Arizona, or, to be more exact, the land between the Altar and Gila rivers. The three Orders of the Church that labored in the territory of New Spain were the Jesuits, the Franciscans, and the Dominicans. The first found their chief work in Southern California, Old and New Mexico, and Arizona; the second in Sonora, Texas, California (Alta) and Arizona, and the third in Old Mexico and Lower California.

Considering the present boundaries of the United States, New Mexico was the first scene of mission activity, the first mission being built as early, perhaps, as 1630. These missions were modest adobe structures and flourished until 1680, when they were all completely destroyed by the Indians, and most of the white inhabitants massacred.

San Luis Rey Mission, California.

This was the greatest uprising suffered by the padres and was due entirely to the arrogance and intolerance of the Spanish settlers. The missions of Texas and Arizona were not begun for twenty years or more later, while those of California were not begun until the advent of the Franciscans in 1768. The missions of Old Mexico will not be considered, though, at first they were missions in every sense of the word. They, however, were nearer civilization and gradually lost their position as outposts, being replaced in many cases by community churches.

In order to begin properly the study of architecture, one must carefully consider all of the missions and then select the most representative; must take this particular mission as the criterion and judge the others by it. Of the California chain, San Luis Rey unquestionably holds first place from the standpoint of architecture. In Arizona, San Xavier del Bac and San José de Tumacácori are both excellent examples, but San Xavier easily holds first place. San José de Aguayo of Texas was the greatest mission east of the Rio Grande, but is now completely in ruins; besides, it may almost be considered as Spanish Colonial on account of its proximity to Mexico. But though it were not eliminated, still it would not rank as high as San Xavier or even San Luis Rey. These two latter missions stand as the best examples of the pure mission style.

San Luis Rey had never the individual importance of San Xavier nor did it ever attain so high a state of architectural perfection. It remained always merely a link in the California chain, while San Xavier, on the other hand, stood quite alone and held a most important post. The Arizona chain was more a figure of speech; in fact, the only missions which survived and constituted the chain were

San José de Aguayo, Texas.

Guevavi, San José de Tumacácori, and San Xavier. The great significance of San Xavier was recognized and it was designed and built accordingly. Furthermore, it partook of the style of Mexico at a period when that native Aztec influence best lent itself to the style which finally developed into what is known as Mission Architecture.

It was during the decline of Spanish and Mexican architecture that the missions of Southern California were given their final form. They had been built and rebuilt with no great assurance of safety, as nothing elaborate was attempted until a firm foothold was secured. All the varied styles found among the missions may be traced directly to Mexico. The Moslems had brought many styles together under their domain, and Spain was in the most propitious position to enjoy the best they offered. Later the trans-atlantic colony borrowed directly the best architectural qualities in evidence in the mother country. The mission fields of the Southwest were then a part of Mexico, but the padres were too distant from the base of supplies to receive much more than moral support. They did their best to imitate the styles in vogue; but such a thing was quite impossible—hence Mission architecture.

San Jose de Tumacacori, two miles south of Tubac, Ariz.

DEVELOPMENT OF MISSION ARCHITECTURE.

THERE is nothing that we may call really new in architecture. One may search the history of architecture or study the great buildings of the world, and he will find the subject marked by a consistent and sober development, everything intrinsically related. All forms go back to the lintel and post or the arch and dome, each perfect in itself, for Nature gave them to primitive man.

Architecture is essentially a fine art, but one not creative in the strictest sense of the word. The peculiar virtues of a style may be handled in many ways according to the temperaments of the various architects, but the fundamentals, ever-existing and unalterable, must remain much the same. The Sainte Chapelle is Gothic and so is Mont Saint Michael; yet they are totally unlike in treatment. To take a more modern example, the work of McKim, Meade and White has often been criticised as being nothing more than a transplanting of Greek and Italian Renaissance monuments to New York City. This, however, is a rather naïve criticism not likely to come from a competent and esoteric critic. Their motifs of inspiration may be found in those trans-atlantic fields, but the architects themselves are quite inculpable, as their treatment is original.

The time worn adage that the Greeks were great because they copied no one, appears ridiculous in the light of a little erudition. Theirs was truly the noblest of architecture, yet they undoubtedly borrowed many of their ideas from the Egyptians and other early peoples.

In the study of the architecture of every land, we must logically go elsewhere to find its beginnings. No great architecture can spring into full blossom on its embryal spot; to develop perfection it must judiciously borrow and unconsciously make its influence felt. Architecture is the one exception among the fine arts in that it wholly perpetuates and does not, in the full meaning of the term, innovate; in other words, it can never be altogether original.

To study mission architecture, one must necessarily go to Mexico, the center from which the padres radiated. It is here that the prototypes of the missions are found. Yet Mexico was newly settled by the Spaniards, who brought their architecture with them; so we must not tarry in Mexico but cross directly to Spain. Here we find peculiar conditions. The Ibernians at an early date found themselves under Roman rule; then they were subjugated in turn both by the Visigoths and the Moslems. It can hardly be otherwise than that their architecture is by no means unified. The Teutonic influence from the north later stimulated the Gothic feeling; the Moors, being confined by the Christians to the south, developed their Moro-Hispanic style; while the central plateau about the capital Madrid, in close association with the courts of Europe, caught the spirit of the Renaissance.

The Moor nevertheless made himself extensively felt; but because of his natural incapacity for expressing himself artistically, he usually had those in subjugation carry out his ideas. We therefore have in every land under Mohammedan domination a style of architecture, each different from the others, but all related under the Eastern spirit, and all, save Persia, based on Christian styles.

We, therefore, must trace the architecture of the mission

as well as its religious history back to the very beginning of the Christian era, for we find the basilican, the Romanesque, and the Byzantine types all directing their influence in the building up of a style which later came under Moorish rule.

As the Roman temple could hardly be adapted to the Christian ritual, so Western Christendom adopted the simple rectangular basilica for its church and the rotunda for its mortuary chapel and baptistry, though both might be included in the body of the church. Across the front was placed the narthex, the space reserved for those who, as it were, had not a sufficient degree of purity to enter with the others. Before the church itself was the atrium, often surrounded by a wall.

The basilica, the first expression of Christian architecture, is often thought as typical of the early stages of the Romanesque style, which marks the transition from the Roman to the Gothic, or the connecting link between the pagan temple and the Christian cathedral. The Greek characteristics had been the architectural order and the lintel; the Roman was a compromise of the two, employing besides a daring use of the arch and dome, while the Romanesque developed wholly into an arcuated and vaulted style.

In the meantime, Byzantine Christendom about Constantinople was developing the basilica into a distinct style under Eastern architects. As the Romanesque was a transition from the Roman to the Gothic, so was Byzantine a transition from the Roman to the Saracenic. Though it never fully developed, even after a most brilliant beginning, it was a great factor in determining the styles to come. It was the first to set stress against stress and was undoubtedly the prototype of the flying buttress; but its greatest stride was the setting of the dome on pendentives.

The plan was usually cruciform, with a large dome over the crossing of the nave and transepts. The dome was the nucleus of the whole design, with the ceiling a series of vaults either barrel or groined. The apse (sometimes three, corresponding to an aisle on either side of the nave) faced the east, and a screen separated it from the nave. Before the screen and to the left was the pulpit. A narthex extended across the front part of the nave with a gallery above, and usually in front of the church was an atrium.

In the Eastern basilica, moreover, timber was neglected and the vaults laid up entirely of brick. The Byzantines retained much from the Romans in the way of construction, save the use of brick rather than concrete. They also took over the Roman interior decoration of mosaics, marble veneering, and slight wall incrustation; and under the Eastern hand it developed to a high state of perfection. The walls were covered with mosaics of great beauty on a ground of gold, in keeping with a somewhat gaudy Oriental splendor. In the case of the smaller churches, frescoes took the place of the gorgeous mosaics. Carvings were done in low relief and mouldings had little part in the decoration. The motifs were for the most part symbolical, and ornamentation for its own sake was scarcely employed.

The Byzantine style was developing with great promise, and first traces of the Gothic style being felt in France (or perhaps England), when the Mohammedan began his phenomenal conquests. He united much territory under his sway, and, as we have seen, had each subject people carry out his innate aesthetic ideas which he could not express for himself. A point of great interest here is that he learned from the Persians the rare art of covering his

domes with brilliant glazed tiles of many colors, an art which he carried with him into other lands. Much of his work being done by Byzantine workmen, it is evident that soon Byzantine influence, too, would be felt in Spain. Here the Moors found a people equal to any architectural task they might assign them. But the Mohammedan faith, in so far as it discouraged riches and worldly possessions, had little effect in Spain. Riches and extravagance marked a period of great architectural splendor, which culminated only in the fall of Granada, the incomparable.

Certain characteristics are common to all styles of Moorish architecture, each being preëminently Asiatic in spirit and largely a matter of superficial decoration, bewildering and often incoherent. Unlike the Byzantine style, the constructive sense is of little moment. Brilliant colors, broken up into small units and spread over large areas of surface, gave an altogether splendid effect. Conventional forms of decoration, evolved by a temperament mathematically and philosophically inclined, were developed into a system of geometrical decoration, unique and ingenious. There is yard after yard of intricate repetition, where monotony is relieved only by the natural inequality of the material, which, in fact, is the saving grace in all such ceramic work; whereas it is the absence of this inequality which makes stamped and stenciled work intolerable.

Pictorial art and sculpture have no place in Moorish architecture, and the Moor had an innate aversion to all forms of art associated with idolatry. To him, religious decoration and images were symbolical of the hated Christian church. His great mosques in Spain are filled with decorations highly elaborate, yet wholly abstract, a mere surface decoration. Arches are carried to a great height,

and one notes a general absence of domical and vaulted construction, as wood was employed rather than brick. Courtyards of great charm, with fountains and covered galleries, are distinctive and interesting features. Little attention was given to the exterior, which usually appears an ungainly pile of masonry with little or no pretense at design.

Soon, however, European influence began to be felt, and the Gothic sense of construction merged with the Moorish in what is known as the Mudejar style. From the fourteenth century on, we have a more consistent and balanced structure. Later examples show the coming Renaissance, which Spain endeavored to perfect to its own taste. Mass rather than detail was emphasized; the decoration was generally confined to the entrance and, to some extent, to the windows, while the walls were left strikingly blank.

Towards the middle of the Renaissance it took the form of the Plateresque, or the style of the silversmiths. The term is well applied. The decoration does resemble very much the designs of a silversmith in its feeling of chiselled elaboration. For the most part it is overdone, but a few of the best examples are very effective. Spain had become overrich and its architecture was rapidly degenerating into styles never before equaled in unprincipled and meaningless decoration, much in keeping with a court life full of sham and of mere strife after appearance. This later style, known as the Churrigueresque, has no intrinsic value and little interest. Unfortunately, it bears the name of an architect not wholly responsible, but upon whose head nevertheless rest the monstrosities perpetrated in this period.

The Mudejar and Plateresque were the styles carried

into Mexico by the Spaniards under Cortéz, though the Churrigueresque made its influence felt later. In Mexico, the conquerors, though imbued with the architecture of their native land, found themselves building upon the styles of a vanquished people and furthermore, styles peculiarly in keeping with the Moro-Hispanic feeling. The architecture of the subjugated Aztec was the barbaric expression of a semi-civilized race. It was highly colored and ornate with a heavy and grotesque decoration, though not without some naïve charm.

At first, the work of the conquerors took more the form of fortifications, as the Aztecs did not humbly submit. When a firmer hold had been attained, the Spaniards turned to the styles in vogue in their native land, regrettably then pervaded by a riot of classicism. Much of the early work in Mexico still remains as examples of classic abortion. By the seventeenth and eighteenth centuries, classic features began to take some proportion and there is evidence of a native tendency to color and ornamentation not displeasing. It is in this period that we find the best examples of Spanish-colonial architecture.

The decorative art of the Aztec had to make its influence felt sooner or later. The Moor had expressed himself in much the same manner, and the Spaniard was not slow in developing it. Besides, the Plateresque proved too delicate for the native workmen; so the depraved Churrigueresque was willingly accepted, which, along with the crowded Aztec carvings, gave the architecture of Mexico an impulse that sent her headlong to utter absurdity and ruin.

The gabled entrance became a mass of vulgar decoration and an abundance of bizarre color. Classic features

were again dwarfed into obscure ornament, straight lines were broken, and immense spirals in low relief subtended across the fachada. They multiplied and broke their colored ornament for the pure joy it gave them to see its sparkle in the sunlight on their white walls. Domes were in abundance, covered with designs in polychrome tile.

The basis of Mexican church design is the cruciform plan, with a dome rising on a low drum over the crossing and usually surmounted by a small lantern. Barrel vaulting and segmental domes are employed, the whole structure often being constructed entirely of brick. Here one immediately recognizes a combination of the Byzantine and Moorish styles, merged into one unified design. The belfry takes a prominent place, as Mexico was then a clockless country. Its simplest form is the "wall belfry," formed by carrying up the wall to a height above the roof and piercing it with arched openings to contain the bells. Of course, in the case of cathedrals, large towers were affixed, built up to a great height by the superposition of several stories, the higher ones containing the bells. The rainfall is drained off by valleys which terminate in plain gargoyles, or more often in the ever-present *canalles*.

The interiors are highly ornate, savoring of the Moorish in general form and Byzantine in decoration. The antipathy of the Moors for the symbolic decorations of the Christians, led them to devote much of their energy to the development of such architectural forms as fantastic arches and domes, as well as geometric decoration. Many fine mosaics and frescoes beautify the walls of the cathedrals, while the individual paintings have always been a source of delight and perplexity to connoiseurs. During the years of dissension, the history in connection with the

various pictures has been lost, and time has stolen away the names of the artists. That many are the work of European masters cannot be denied, as many objects of art are known to have been brought from Spain to the New World to fill the churches. The search for Murrillos in Mexico is a fascinating story, and the surprising number brought forth is most amusing.

Mission architecture is based entirely upon the Spanish-Colonial style of Mexico, with a rich heritage of the best architectures of Europe, which culminated under the hand of the Moor; an architecture at once containing all these styles, yet itself an individual style. Its very limitations mark it a distinct type. Had the padres been able to build as they wished, we should have had Spanish-Colonial architecture; they fell short in their intentions, and the Mission style was the result. In other words, they fortunately did not carry with them artisans skilled in making grotesque assemblages of ornament, but rather, through their own efforts, they unconsciously created a style of their own.

The padres, however, were skilled in church design; each of the larger missions shows a singular unity, true to some particular style. Many of the smaller California missions, not to be treated on any elaborate scale, were simply modelled after the basilica, with a long rectangular room and wooden ceiling. So, with the more important missions, the Byzantine motifs were very applicable especially in monolith construction and interior decoration, a feature to which the un-Christian Moorish decoration would not be suited. The large dome on pendentives, as we have seen, is of Byzantine influence, as are also the various forms of vaulting. Both the dome and fachada

Monterey Mission.

were painted in imitation of the polychrome title work of the Moor. Much of the interior was painted to resemble marble, tile, and even mosaics.

San Xavier is for the most part of Byzantine influence, especially as to its cruciform plan, construction, and most of its interior decoration. Its stilted arches, domes, and fantastic windows are, however, Moorish. In fact, the lower half of the interior with its many statuettes, frescoes, and glitter of gilt is Byzantine, while the upper part, with its arches, windows and domes impresses one as Moorish. The distinctive towers and belfries were developed in Mexico, and most of the accented yet restrained decoration has the touch of the Aztec.

It would be quite impossible to formulate a chronological table of the mission style. The missions were built intermittently over a period of two hundred years and at great distances from one another. In some instances, a mission would partake of a certain style in vogue in Mexico and, perhaps, its building would be prolonged for many years; while, in the meantime, another mission, influenced by a later style, might be completed. Take the case of San Xavier: it was one of the earliest of all missions and founded over sixty years before the first California mission; yet, anomalous though it may seem, its final form shows a style later than that of any other mission.

This may in some way be accounted for by its proximity to Mexico and its being finished later than many of the missions. San Luis Rey, however, the last of the great missions of the California chain, has much in common with San Xavier, but, even though built at a later date, is characterized by an earlier style. In these two examples

Dolores or San Francisco de Assisi Mission, California.

mission architecture showed great promise; but all was suddenly stopped by secularization; and mission architecture, then at its height, was forever at an end.

In a general way, the mission style may be divided into three periods. The first, of course, comprises those small adobe buildings of New Mexico, Texas and Arizona which first served the needs of the padres. Guevavi, the first of the Arizona missions, is a good example; its ruins may still be seen near the present town of Nogales.

GUEVAVI IN 1880. (Only photo in existence.)

When the missions became more firmly fixed and some safety assured, the padres undertook more serious structures. They turned to Mexico for guidance, which at that time was dominated by a theatrical classic spirit, and consequently, the second period is usually marked by a heavy and misshapen classic fachada. It must be noted that the ornamental gable about the entrance reveals

San Carlos Mission, Carmel, Cal.

Façade of San José de Tumacacori Mission in 1880.

either one or the other of the last two periods, the general form of the Church not being included. Most of the California missions come under the second period, especially San Carlos (Monterey), San Francisco de Assisi (Dolores) and, to some extent, Santa Barbara.

The third period is characterized by the Plateresque and Churrigueresque, but of a modified and more simple form. The two styles came under the influence of the native Aztec architecture, and evidently, when applied to the missions, produced a very successful and interesting style. To this period belongs San Xavier, San Luis Rey, and San Carlos (Carmel). San José de Aguayo of Texas could also be placed in this group, but its date is much earlier. As has been mentioned before, it really cannot be called a mission; for, like many cathedrals of Mexico, it was influenced directly from Spain before the classic wave was felt.

A few missions partake of both the second and third periods. San Luis Rey comes in this class and San Jose de Tumacácori tends very much towards pseudo-classicism. This latter case may be accounted for in that it was built shortly after San Xavier and, being not many miles distant, could hardly employ a similar style. The padres, then, referred to the style rapidly passing out and recreated one of the best designed fachadas in all mission architecture. That San José de Tumacácori ranked higher than San Xavier as a piece of architecture is a mistake made by many architects. Today it stands an impressive ruin and one is apt to let the imagination warp his better judgment. San Xavier is entirely free from classic influence, borrowing simply from the late ornamental style of Mexico. It marks the beginning of a well balanced and consistent design, and stands the best example of mission architecture.

Santa Barbara Mission.

San Xavier del Bac about 1868, just as the Franciscans left it.

Some of the most thoughtful buildings of the United States have been inspired by the mission style. At the present time it may be said to approach something of a craze. The "Ponce de Leon Hotel" and the "Alcazar" hotel, both of Florida, are modern examples but partake more of the Spanish-Colonial. "Mission Inn," California, is distinctly mission, as are many other serious structures throughout the West. School-houses, especially, are effective when designed along such lines—low tile roofs and great blank walls, with some detailed ornamental feature about the doors and windows—while the patio and open windows give an abundance of fresh air and light. Besides, the construction is comparatively inexpensive.

The Panama-Pacific International Exposition at San Francisco was of Moorish and Spanish styles, notably in the ornamentation of the outside walls of the buildings, done by Messrs. Bliss and Faville of San Francisco. The low domes and the colored ensemble by Jules Guerin gave it a distinctly Oriental appearance against the blue of the Pacific and California's cloudless sky. A similar and notable work based wholly on mission and Spanish-Colonial styles was the Panama California International Exposition at San Diego, conceived by Mr. Bertram Goodhue. It marks an epoch in the architecture of today, and no greater modern work could be cited in this connection.

The modest missions of the padres have made their greatness felt in no small way in this country; επιχορικ of the land of sunshine and the painted desert, beautiful and true in simplicity, they represent the only architecture indigenous with us.

CHARACTERISTICS OF MISSION ARCHITECTURE.

At the dawn of civilization, man laboriously set up huge columns to carry a crude roof that meant his protection from the elements; so do we find to a great extent the beginnings of mission architecture,—built primarily for pure utilitarian needs and developed along lines limited by rigid conditions. To be sure, the style is based upon the styles of Spain and Mexico; but in the process of adaptation, they were so changed that it may be called something of a new style.

Mission architecture was developed in a new country under hitherto unknown conditions and from materials never before in the hand of white man. The clay beneath his feet was a peculiar kind; water was scarce, and in many cases wood of any reasonable dimensions was difficult to secure. Any other materials he may have desired had to be brought laboriously over the sands from Mexico. The sun was intense and little consideration need be given to cold and rain. The Indian was a new factor to deal with. His religion was to be taken from him and his idols broken. If he objected strenuously enough, the mission would have to serve also as a place of protection against his hostile attacks.

It is evident that limitations were on all sides and many conditions had to be met, no matter what other ideas of architecture and building the artistic padres may have held.

Of the thirty or more missions in the Southwest, scarcely

San Xavier del Bac.

any are differentiated even in the minds of those who are apparently interested in architecture or archaeology. The missions seem to be considered as a whole and are thought to be very much alike. To be sure they were built to a great extent under the same conditions, by the same type of builder and for the same purpose; but what two architects of today, even though they be of the same school, design with the same feeling? Why, therefore, should missions be similar to any marked degree simply because they necessarily have such characteristics in common as low, shaded cloisters and massive walls? Even the missions of the California chain, though built for the most part by the same order of padres, are each and every one a separate jewel, with San Luis Rey the most perfect.

Evidently, then, the missions of California, Arizona, and Texas may be expected to be quite unlike; and such is the case. Each chain was built by independent groups of padres, and hence each group collectively reveals different treatment from its neighbor.

In general, the mission occupies a position elevated above the surrounding country. The buildings and garden are enclosed by a wall. The missions themselves are usually conventional in arrangement. The nave is practically always rectangular, San Xavier being a notable exception in that its plan is cruciform. When a tower is employed, its first floor serves as a baptistry, otherwise, the baptistry opens from the nave at some other point, as is the case with San Gabriel of California, where the baptistry is entered about midway down the nave. At one end, of course, is the main altar with the sacristry opening immediately behind or to the side. The choir-loft is at the opposite end, often over the main entrance and sometimes

Staircase, San Gabriel Mission, California.

San Buenaventura Mission, California.

reached by a stairway on the outside of the church. When a tower is a front feature, (the altar naturally being at the other end of the building), the stairs wind about in the walls of the tower to the choir-loft over the nave.

The walls are from three to six feet in thickness and were seldom carried more than one story or story-and-a-half in height. When rock or stone was to be had, the wall was carried up about one third of the way with such material and then finished with either adobe or burned brick. The more capacious missions had little use for adobe, as it never attained any degree of hardness. A form of cement stucco covers the outside of the wall and the interior is plastered with a lime plaster, both known today for their excellent quality, and said to have been made by a process of which the secret has been lost.

Low and massive buttresses are placed against the walls to insure their stability. Especially is this true in the case of the California missions where earthquakes are so prevalent; in fact, it is from this cause that most of them have suffered destruction. A great buttress is actually used on the fachada of San Buenaventura to balance the massive tower opposite. In San Xavier, there are flying buttresses, strengthening the belfry and cupola of the towers, which rise to a considerable height. In most every case, one is aware of the great skill employed in placing the buttresses; especially when they are used in some missions to react against the stresses caused by the high brick arches, sprung over the nave from pilasters on either side.

In the event of arches, the roof is constructed wholly of brick, as are oftentimes the floors also. The roof between the arches is formed into low elliptical domes, with some decorative design. Groin vaulting is predominant over

San Gabriel Mission, California.

the smaller rooms, while low segmental domes, when possible, cover undivided rooms of importance, such as the baptistry and sacristy.

In proportion to the number of missions, domes are comparatively scarce in the California chain; but the large hemispherical dome over the intersection of the Cross in the building, the well proportioned arches in each wall of the octagon tower and the flying buttresses put the Arizona Missions in a class by themselves, as the combination of these most beautiful features are not found in the Missions of other states. The domes were built of brick, hence necessarily in connection with a brick roof, which was built more or less level. The padres, in their excellent judgment, realized the appropriateness of such a roof to arid conditions and its unsuitability to California where they experience a season of rainfall each year.

The roof over the minor projecting wings or over the more modest missions often consists of large red tiles laid on rushes, which, in turn, are fastened to wooden trusses with thongs of hide. Most of the roofs, however, as in San Gabriel, have long since fallen in and been replaced by others. An interesting form of ceiling construction is still to be found in San Fernando Rey, Dolores and San Ynez, where horizontal beams are supported by flat corbels projecting from the wall. San Xavier alone retains a roof and ceiling wholly of brick.

The domes of any importance standing today are placed on a high drum, rising on arches and pendentives. The drum is pierced with small fantastic Moorish windows; and in remembrance of the glazed tile of Spain, the padres, no doubt, painted the domes to the best of their ability. The story is told that the dome of San José de Aguayo in

Texas was so beautiful that the Indians called it "Day Star of their Manitou." A small lantern often surmounts the dome, bearing a cross. In order to reach the cross in times of danger or in case of mishap, small projections of brick are found up the side of the dome in the fashion of steps.

The towers are capped with small domes or in some cases by a pyramidal roof as with San Carlos, (Monterey); again, San Carlos, (Carmel), has a small dome resembling a bee hive. Both the latter missions, only a few miles apart, are rather diminutive, but are nevertheless exquisite bits of mission architecture.

The bells played an inportant rôle in mission life. They called the Indian to prayer and called them from the fields; their tinkling regulated the day as would a clock. Consequently, they are placed high, either in arched openings cut in the wall or in towers. In the case of San Gabriel, the only form of exterior decoration is the wall-belfry. Pala chapel has an interesting belfry in the form of a small decorative wall built away from the church. The bells in the towers were rung by means of long ropes which hung to the ground. Flights of stairs led to the belfry, but the padres, realizing how many times a day the bells had to be rung, thus found means for the saving of labor. In Tumacácori the bells are placed high over one's head and a rope would necessarily have to be used. One of the best evidences that the bells were rung from below arises from the appearance of grooves in the side of the piers and edge of the floor made by the ropes.

A few of the missions possessed very fine bells sent from Mexico or sometimes from Spain, though for the most part they were rather crudely cast and produced a high-

Bell Tower of Pala Chapel, California.

pitched metallic sound. The story of the mission bells is indeed fascinating and well worth studying by someone overburdened with time. It is said that all the clappers of the bells of Arizona were made from a large meteorite which fell in the Santa Rita mountains. Two clappers unearthed at Tumacácori may be seen in the museum of the University of Arizona. San Juan Bautista is a rare exception in this connection and famous principally for its bells. Tradition relates that they were made by an old bell-maker of Peru who never divulged the secret of their composition. They were nine in number and formed a rare and beautiful chime; but the bells gradually disappeared and much speculation has been given as to their whereabouts. For that matter, nearly all of the missions are minus their bells, perhaps, due to tourists musically inclined. One bell of the lost chime was recently discovered by the author, hanging in the belfry of San Xavier del Bac. For years it had hung, unrecognized, but noted for its sweet tone.

A striking thing about the general ensemble of the missions is the large expanse of blank wall surface with a restrained area of decoration about the entrance, which usually takes the form of a fantastic gable. No two gables are alike, though the severe classic elements predominate in the California chain, due to their being *finished* at an earlier date than those of Arizona and Texas. It seems inexcusably inconsistent that the California missions as a whole must resort to debased pseudo-classicism on the fachada, even the great San Luis Rey not being an exception.

The missions of Arizona and Texas, on the other hand, employed the very ornate style then predominant in Mexico,

but fortunately, through necessity in a more restrained manner. The gable is overrun with arabesques in low relief, and highly decorative columns support broken arches, while curves of various radii give it a peculiar sky-line. Tumacácori being finished at a later date, partook of the classic spirit, much to its detriment. Filials, consoles, and other decorative features finish off the walls and add ornament here and there; for instance, the lion's head and filial are worked in the parapet wall about the roof of San Xavier.

Interior decoration varies with the missions; some are highly ornate while others can scarcely boast a spot of color. Few of the California missions are decorated in a way to compare favorably with San Xavier, Tumacácori, or even San José de Aguayo of the past. San Xavier stands unequalled and will be treated elsewhere. San José de Aguayo is, for the most part, a thing of tradition; and only a few remains of a decoration of great delicacy may be seen in Tumacácori. The colors employed are pale blues, oranges, pinks and magentas, while orange and black are often used together in a sort of Greek border. Dainty flowers of a conventional pattern form decorative bands, appearing very much like stencil-work. Such, however, is not the case, for each is painted with infinite care.

The altars are large, intricately decorated, and covered for the most part with gold leaf. Before the altar, a low wooden fence takes the place of the handsome metal screens of Spain and Mexico. The pulpit is usually a thing of great interest and is found in its place to the left of the altar and down the nave a short distance. It is usually very cleverly hand-carved, and fitted together without nails. San Luis Rey prides itself on having a pulpit from Constantinople, dating back to the Middle Ages.

Chapel Door, Santa Barbara Mission, California.

231 ENTRANCE SAN GABRIEL MISSION Founded 1771

The domed ceilings are beautifully painted, or covered with gold leaf, the latter, for the most part, having long ago been picked off.

The entrances and windows are few in number and small in dimension. The doors are low and heavy, and divided into many small panels, due to the lack of facilities for handling large trees. The windows are usually rectangular and in some special cases of fanciful form. Wooden grills are placed before the lower ones, and wooden balconies are usually found in connection with casement doors, if there be a second floor or choir-loft above. These influences, too, are traced directly from Mexico and Spain. The doors and windows have iron bolts and hinges, of fair workmanship. Sometimes iron pivots are used in place of hinges, as may be seen in the old door at San Gabriel.

One of the most attractive and dominant notes of mission architecture is in the long, low cloisters, usually in the rear and enclosing a garden or patio. Sometimes the roof rafters are supported by a simple architrave and heavy columns, but more often by arches sprung from low square piers. No two arches are of the same dimension; in fact, everything about the garden breathes a charming inconsistency. The floor is laid with large, irregular, dull red bricks, and heavy Spanish lanterns hang from the rafters. Low seats are built against the walls, the arms of which often project from the walls themselves. Heavy chairs and tables are placed about, simple in line and crudely made. Often laterally sawed tree trunks serve as low stools. The soft beauty of the garden cloisters is the supreme delight of every water-colorist.

A huge stone fountain occupies the center of the garden, and small pools are placed about. Narrow walks lead

among the flowers, and overhead are fruit-laden trees. Santa Barbara has a sacred garden rarely seen by visitors and to which no women are admitted. Mrs. McKinley, the wife of the President, was given the great privilege of entering the garden, as Santa Barbara had always been

Corridor of Santa Barbara Mission, California.

kindly remembered and assisted by her. At one time a second woman entered, but by mistake, so her exit was speedily effected.

San Xavier has no such garden, for, in its case, the water would have been difficult to manage for such a purpose and, again, the space was enclosed by a massive wall for defense. Tumacácori, however, was more fortunate and must have possessed a very beautiful garden. Evidences of an irrigation system are visible and parts of the garden wall are still standing. The padres were also very for-

Doorway with Three Skulls, Santa Barbara Mission, California.

tunate in having a well in the garden. No vegetation of any kind now remains and the ground about the ruined church has been torn up by treasure seekers. The walls of the church adjoining the garden are inlaid with small bits of red and black rock, forming a rich conventional design.

Each mission has its tiny grave yard, either near or adjoining the mission itself. At Santa Barbara the doorway which leads to the gravèyard from the mission is well known. Three human skulls are embedded in the wall over the door, signifying death or the brevity of life. Ad-

Mortuary Chapel, San José de Tumacácori, Ariz.

joining the cemeteries there is often a small chapel in which the dead were placed, awaiting burial. San Xavier has a small rectangular chapel, while Tumacácori possesses a rotunda, of Byzantine influence, with its outside surface inlaid with small pieces of red stone, in keeping with the garden wall.

As a closing word it may be well to mention the underground passages. Most missions of early date possessed secret passages as a means of escape in case they were besieged. It is difficult to locate any of them now, as they are well concealed or fallen in. San Diego mission has an underground passage of very ingenious arrangement, leading, perhaps, from some room in the mission to the well at the foot of the hill. Its entrance has never been sought for and it has for the most part fallen in, as can be found by exploring from the well. The passage led underground to the well, opening into the side several yards below the level of the grade. The padres could then go and fetch water without being seen by a hostile band of Indians. Across the well, the passage continued some distance further and made an exit in a group of palm trees, planted by the fathers. Hence, in the time of great danger, the padres would enter the passage, leap across the well and escape by the exit at a considerable distance from the mission. The mission at an early date was destroyed and several of the fathers escaped by this means. Tumacacori is said to have had a passage and the story goes that there was an iron door leading to it in the garden.

Staircase of San Luis Rey Mission, California.

SAN XAVIER DEL BAC:
THE GREATEST OF ALL MISSIONS.

1. History.
2. Description.
3. Architecture.
4. Construction.

San Xavier del Bac before Restoration.

SAN XAVIER DEL BAC.

The old Mission Church among the Papago Indians in Santa Cruz Valley, Arizona.

By Ildefonsus

Away towards the glowing South land,
'Neath a dome of azure hue,
Near where Santa Cruz rambles
Through the plains 'mid the mountains blue,
Majestic amid the hillocks
Where the cactus luxuriant grows,
Looming up 'gainst the distant mountain
Crowned with mid-summer snows!
Stands the old church of San Xavier,
Lifting its towers high,
And its cross gleams out to the distance
Where the Rockies touch the sky!
Gaze at its massive portal,
Bearing upon its arch
The date of a century vanished
In the ages' onward march!
And mark above the entrance
To this ancient temple bless'd,
Preaching love and penance,
The old Franciscan Crest,
Like a crown bereft of its brightness,
Above this crest so good,
Remains but the lone pedestal
Where once a statue stood.
Glance at the shatter'd casements,
Looking so grand and grim,
That the sunlight almost shudders

Ere it ventures to enter in!
Pause at the noble gateway,
Study the stately towers,
That, looking down on the valley,
Have seen a century's flowers!
List to the old bells chiming
From their windy room above,
While back from the mountains is echoed
The music of faith and love.
Step within the gateway—
Pause in the atrium dim
See in the shade of the tower
The mortuary chapel grim,
Chapel'd beneath this tower
Is the tarnished font—once bright—
Whence flowed the saving waters
On many a neophite.
And on the wall, beside it,
Is pictured the Baptist grave,
Pouring on Christ the water
Caught from Jordan's wave!
Enter the ancient temple,
Stand in the sacred pile,
Trace in its every outline
The well-marked Moorish style.
A sigh will come unbidd'n,
Like a troubl'd ocean wave,
And you'll drop a tear of sadness
As you pass through its only nave.
Measure the lofty arches—
Each a vision of old recalls—
Resting, as if by magic,
On the pillars in the walls!
Turn to the right and ponder,
Pictured upon the wall

The chosen ones, all kneeling,
Where tongues of fire fall!
Then turn away from the vision
Of the bright descending Dove,
To read the frescoed story,
Of the ancient Supper of Love!
In the epistle chapel
With gentle folded hands
Beneath the cross, all tearful
The Mother of Sorrow stands.
And on another altar,
Where sculptured angels wait,
Shrined in a golden nimbus
Stands the Immaculate.
Look at the walls around you,
Whence our Queen of the Rosary stoops
To give the mystic chaplet
To the kneeling angel groups.
There too, the work of the artist—
Dimmed by the breath of time—
Shows the scene of Nazareth
In the life of him Divine!
Come to the gospel chapel
And look at the face so mild,
Of the gentle Foster Father
Guarding the Savior Child,
Kneel at its shrine of sorrow,
Where the story of love is told
By the cross, the nails, and the scourges,
And the dead Christ, pale and cold!
Here too, the well-traced picture,
Which time has not effaced,
Shows our Infant Lord in the temple,
In Simeon's fond embrace.
And again, the brush of the artist,

Moved by some trained hand,
Tells the story of Saragossa
In the trans-atlantic land!
And pictured upon a banner
Is our lady of Guadalupe—
Flowers are clustering 'round her,
And wond'ring angels group!
And still in its dim old corner,
Seeming to smile at time,
Stand the tribunal of penance—
That mercy seat sublime!
Turn we to the altar—
Like warriors clad in steel—
Guarding the chancel gateway
Crouch the Lions of Old Castile!
Above the sacred table,
Clasping the cross in his hands,
Clad in his sable habit,
The Sainted Xavier stands!
And yet above the Patron,
As watching over all,
Appears the Virgin Mother,
Guarded by Peter and Paul.
And 'mid the half-burned tapers,
And vases old and odd,
With the crucifix above it,
Is the home of the captive God!
And in the fading pictures
On the chancel-walls, to the right,
Behold the adoring Magi,
And the Holy Family's flight.
While near the gospel corner
With Mary, face to face,
Appears the great Archangel
Hailing her "Full of grace!"

And the cold wall tells the story
Of the morning scene of yore,
When shepherds came from the hillside,
The new born God t'adore.
Like sentinels ever watchful
On Zion's ancient towers
Stand on either side th' apostles
'Twixt vases of mouldering flow'rs
While out from their antique niches,
Look Franciscan Saints of old;
And bright-winged cherubs cluster
On the ceiling high and cold!
Climb we the stairs to the choir
And study the pictured walls,
Where chanted the tonsured Friars
In their dark and oaken stalls.
Dim'd by the veil that a century's
Dust has over them spread
Look out the four great authors
From the frescoes over head,
And Blessed Francis carried
In a fiery chariot of love
Seems to take flight from this drear land
To realms of joy above!
And Dominick, all enraptured,
With fixed and upturned face,
Receives the Blessed chaplet
From the beautiful Mother of Grace.
One more picture we notice,
Ere our task is done:
The quiet home at Nazareth,
Where dwelt the Holy One.
It looks but the carpenter's dwelling,
With the walls unadorned and bare,
But, Oh! 'tis effulgent with glory;
For Jesus and Mary are there!

And Joseph, the Foster Father,
As lily undefiled,
Sits near the Virgin Mother,
Caressed by the Holy Child!
Carefully down the stairway
We slowly wend our way,
Filled with an awe and a sadness,
That moves the heart to pray.
Pray we that old San Xavier
May not for age be forgot;
And again the lamp of religion
May burn on the holy spot.
Soon may the Papagos gather
Beneath the sacred shade,
Where their fathers knelt 'round the Black-Robe
Listened, believed and prayed.
Soon may the Black-Robe's labor
The treasures of faith unfold,
And this mission bloom in the valley,
As once it bloomed of old.
May its fading pictures be bright'ned,
Its statues newly dressed
And the touch of the artist emblazoned
Its old Franciscan Crest.
May its arches again re-echo
The sound of the Vesper hymn,
And fervent souls to worship
Kneel in the shadow dim.
Brushed from each shrine and altar
The gathering dust and mold,
May the daily oblation be offered
Which the Prophet hath foretold,
May its broken cross be uplifted,
And its bells more sweetly chime,
And its glory remain untarnished
Until the eve of time.

San Xavier Mission, (General View.)

History.

Since the discovery, or rather re-discovery, of Father Kino's lost journal by Dr. Herbert E. Bolton of the University of California, one of the great epochs in Americana, we can place quite accurately the trips of Father Kino and the beginnings of the missions, hitherto a matter solely of conjecture. Kino (Kühne) himself tells that he visited Bac for the first time in 1692. Bac is about nine miles south of Tucson, and is the name of the Indian settlement at which the mission is located—hence, San Xavier del Bac.

The word itself is Papago and there has been much discussion as to its meaning. Some hold it signifies "ruins" or "ruined adobe house," inspired, no doubt, by the note made by Father Segesser, an early priest at the mission of San Xavier del Bac, that Father Kino utilized an ancient ruin on the spot, as the first mission of San Xavier. It must be admitted that it is indeed poetic and beautiful to think of the ruins of an unknown people, blossoming forth under the Holy Cross as the Mission of San Xavier del Bac. However that may be, exhaustive research has proved the word Bac to mean "place where there is water" or "marshy ground." This is now the accepted meaning of the word and it is just as feasible as the former meaning, if not more so, since Bac is one of the two places in the radius of several hundreds of miles where there is a spring of good water.

Like Casa Grande, it was the scene of several civilizations and flourished, perhaps, about the same time, 1000 A.D. Just who these ancient peoples were is not known, but they are now thought to be contemporary with the cliff-dwellers, and in turn the parents of the present Pimas.

Humboldt ventures that they were the Aztecs passing on their way to Mexico, and a legend goes that they came from the North.

At any rate, Bac is a place of some historical and archaeological importance, and at the time of Father Kino, was the largest settlement in Pimeria Alta. It is likely that he would have made a trip as soon as the opportunity afforded of visiting this flourishing place and making preparation for the establishment of a mission. It is said that the Indians, hearing of Father Kino's work in Pimeria Baja, sent a delegation to visit him in 1687 at his first mission and headquarters, Nuestra Senorade los Dolores. They besought him to visit the Santa Cruz Valley and build a mission for them. Guevavi had been built a few years before, so he and Salvatierra travelled as far north as Tumacácori and established the mission of San José. They were the first white men to enter the country since Coronado.

In the year 1692, as has been said, Kino made the first of many visits to Bac. He often dwells upon the excellence of its location for a mission. In a letter to King Philip V. of Spain, he describes Bac in the following words: "There are already very rich and abundant fields, plantings and crops of wheat, maize, frijoles, chick-peas, beans, lentils, bastard chick-peas, etc. There are good gardens, and in them vineyards for wine for masses, with reed-brakes of sweet cane for syrup and panocha, and, with the favor of Heaven, before long for sugar. There are many Castilian fruit trees, as fig-trees, quinces, oranges, pomegranates, peaches, apricots, pear-trees, apples, mulberries, pecans, prickly pears, etc., with all sorts of garden stuff, such as cabbages, melons, watermelons, white cabbage,

lettuce, onions, leeks, garlic, anise, pepper, mustard, mint, Castilian roses, white lilies, etc., with very good timber for all kinds of building, such as pine, ash, cypress, walnut, china-trees, mesquite, alders, poplar, willow, tamarind, etc."

The condition today is entirely different and small sage-brush and dwarfed mesquite-trees mark the spot of this former paradise. That his letter is probably true is borne out in part by the great dimension of the mesquite ceiling beams and fine mesquite and pine doors, to be seen in the mission. Mesquite trees of such size are seldom found today in the valley, and the pine trees exist only in the mountains.

He makes note in another place of his going down the San Pedro River to the Gila with Capt. Bernal and a guard of soldiers, returning by way of Bac in the fall of 1697. He also speaks of founding ranches in the Santa Cruz and San Pedro valleys, preparatory to founding missions, few of which materialized.

In 1699 he visited Bac and Sonoita with the Visitor-General Antono Leal and another Jesuit. It was, no doubt, at this time that they decided to found a mission. For seven years, seemingly, the project had been seriously considered, perhaps because of its being such a great distance from the base of supplies and because of the great length of time required to reach it. However, he states definitely in his journal that in either the latter part of April or early May, 1700, he went to Bac and founded the mission of San Xavier, in honor of the great Jesuit "Apostle to the Indies," ever his inspiration and guide. One has been tempted to push the date slightly forward, as there were no tangible facts on record; now, once and for all time, the date is settled by Father Kino's own manuscript.

Just what sort of a church he built is impossible to say, but we may well presume it was very similar to the one he built about fifteen years before at Guevavi, of which the ruins still remain. In Father Segesser's words: "God had placed such building material near at hand in the shape of ancient estufa, or kiva, still standing a short distance off." This ruin evidently was incorporated in the original building; but the belief often held that the present beautiful structure was built at that time is, of course, quite absurd.

Father Francisco Gonzáles was put in charge of the mission in 1701 and it was administered, like Guevevi, from Dolores in the diocese of Durango. In this respect, the manuscript shows Bancroft to be wrong in his statement that San Xavier had no resident priests but was administered from Guevavi as a visíta. In the same year, the untiring Kino and Salviaterra were at Bac and Tumacácori.

At this time the missions were flourishing and in Sonora alone (including what is now Arizona) there were twenty-nine missions with seventy-three visitas and rancherias. Father Kino visited San Xavier the last time in 1702, although he did not die until 1711, nine years later, at the mission of Magdalena. He made over forty trips and baptized alone over four thousand Indians. This strenuous life told on his advancing years and prevented the long trips into Arizona toward the end of his wonderful career.

Several priests followed Gonzales until 1750, when the Pimas revolted again, and the mission was plundered. The priest in charge was Father Paner, who escaped to Suamca. He leaves a very interesting note in the Tubac register as follows: "On the 21st of Nov. 1751, all this

Pima nation rebelled and deprived this mission of its spiritual minister, until now, 1754, in which year the Indians have returned to their pueblo, meaning as they say, to live peaceably. And for the authenticity of this writing, I sign it. Francisco Paner." He was entirely alone at San Xavier, 60 miles from the nearest mission, and though he undoubtedly knew trouble was brewing, he held his post. The Pimas had revolted before, but as there were no missions in northern Pimeria Alta (Arizona) at that time, most of the danger was felt about the Altar River. Father Paner was chiefly instrumental in quieting the natives. A presidio was established at the visita Tubac in 1752 for the protection of San Xavier and its visitas and rancherias of Christian Indians.

Peace was restored and the intrepid Jesuits again started out for the mission field. Paner resumed his charge at San Xavier. It is very probable that the mission was administered from Tubac, as the latter place was well garrisoned. About 1776, the Presidio was moved from Tubac to Tucson, as the latter visita was much closer to Bac and the danger from the Apaches was becoming serious. The amount of territory covered by one priest seems enormous. Tubac is approximately twenty miles from Bac, Tucson nine miles, and Tumacácori thirty miles, comprising an area of five hundred square miles; yet the baptismal and marriage registers show all these places administered by the lone priest in charge at San Xavier del Bac.

We have hurried over the years of patient endurance of the padres in the strange land beset with savages. It would be tedious to recount the times of privation and suffering amid the few bright years of prosperity. The bare floor was the padre's bed, and the habit his only cover-

ing; parched corn was his food, which he often shared with the Indians. He had pledged his life to Christ; suffering to him was sweet, and martyrdom a privilege.

In 1764 there were about 1,250 good Indians, the others doing much as they pleased. The fathers could hardly be expected to hold thousands of Indians without some help in the way of soldiers or necessities, and the Government was sadly negligent, as well as the Church, at times. The affairs of State were undergoing a radical change, and that its colonies were forgotten is very plausible. Culminating all, in 1767, like a thunderbolt from a clear sky, the Jesuits were expelled from Spain and its possessions.

Concerning this great blow to the order of Jesuits, let us look at the bare historical facts from a non-sectarian point of view. Think of the broader meaning—the welfare of Spain, the Mother country, rather than the small mission-field of the Southwest. In Spain, for the year 1749, statistics show one hundred and eighty thousand persons belonging to the clerical class, among whom one hundred and twelve thousand belonged to Orders. Furthermore, they enjoyed a revenue of three hundred and fifty millions of dollars, a sum equal to the entire revenue of the State. Charles III. came to the throne, perfectly orthodox in his religious beliefs. He soon realized that the Church and State must be divorced, a thing his predecessors felt but lacked the courage to bring about. The Jesuits were rapidly becoming the power behind the throne, possessing boundless wealth and meddling with the Universities and schools. Feeling was growing against them in other countries; Pombal was working for their destruction in Portugal and Frederick the Great was working for the enlightenment of

Germany. Largely because of shrewd energy of the Spanish ambassador Moñino, afterwards Count Floridallanca, the Jesuits were expelled from all Spanish lands, at midnight in March, 1767, by the order of the King. They departed in thousands into Italy and Corsica, and later in 1773 their Order was formally abolished by Pope Clemont XIV.

The missions were immediately abandoned by the Jesuits, who started for Mexico on their way to banishment, themselves in no way to blame. There is a popular opinion that the Jesuits had accumulated great riches from the mines about and, unable to take it with them, buried the treasure in the missions. It is a fortunate thing San Xavier has been more or less protected, for treasure-seekers have practically dug up the whole of the ground about Tumacácori. Several small ornaments at various times have been uncovered in the missions, but they are of no great significance. The missions at that time were so poor that the Jesuits had really very little to bury and the story of the mines is much overdrawn.

In 1768 the Order of St. Francis was requested by the Government to take over the abandoned missions, which they did in a most noble way; and the men they sent forth were as sincere and daring as those unfortunate padres who were retracing their steps. To San Xavier was sent Fr. Francisco Garces, O.F.M., destined to become a great figure in the history of that mission. His was the most distant and precarious of the missions in the Pimeria Alta, but he was equal to the task assigned. With him went Fr. José del Rio as compañero.

Before the year was over the mission was destroyed by the Apaches, while Garces lay sick at Guevavi. The official report for that year shows a population of two hun-

dred and seventy, and the mission prospering—quite a drop from a population of one thousand two hundred and fifty of a few years before; but all the work had to be done over again; and the expulsion and second destruction had been keenly felt. The report also states the "adobe church" was sufficiently capacious but poorly equipped as to vestments and furniture. Fr. Garces, "armed with only charity and apostolic zeal," gradually won the love of the Indians for miles around; they called him their "old man," although he was in fact a very young man. Arricivita speaks of him in the following glowing terms: "Fr. Francisco Garces was never more happy than when he was engaged in converting souls from paganism, and it seemed as though he lived on the bread of Divine Providence alone. He carried no provisions, but subsisted upon what the Indians would offer him. No road, be it ever so rough and dangerous, could deter him; the most perilous situations were sweet to him, if only he could give the natives an idea of Almighty God, who created them, and of the Living Savior, who redeemed them."

Because of the fervent zeal and intrepidity of the Franciscans, we find in 1776 forty flourishing missions in their care, eight of which number, including visitas and rancherias, were in what is now Arizona. It is difficult to discover just what constituted a visita and ranchería, or even, at times, a mission. The word pueblo is used often to define the first two terms. A visita, in the strict sense of the word, was a mission station, a settlement under a well established mission and attended by the mission priest. The mission was built as headquarters, while the visita often had no church of its own, but simply a house for the priest during his visit. A ranchería was nothing more

than an Indian village, cared for, if possible, by the nearest priest. The whole of Pimeria Alta was included in the diocese of Durango.

Guevavi and San Xavier were the only real missions at that time. Each had several visitas, some of which later became missions. For instance, Tumacácori was at first a visita of Guevavi and later in the Franciscan period became a mission rivaling even San Xavier, though often attended by the latter. Besides, San Xavier always retained Tubac and Tucson as visitas, from the earliest times. In 1752 a presidio under Don Juan Bautista de Anza had been placed at Tubac and in 1776 moved to Tucson; so it is very likely that during the times of disorder, either of these two latter places might have been the headquarters and San Xavier along with Tumacácori the visita. In fact, old registers indicate this to some extent.

Fathers followed Fathers in succession, and each in his turn stood in *loco parentis* to the Indian. Yet, in the registers, never once is the "new" church mentioned—the present church. Concerning the date of its erection there are few tangible facts on which we can base our reasoning, so that the point has always remained unsolved. There are many stories told concerning it, some, perhaps, in part true and others due to the Indian's love of story-telling. It may be well to stop here in our historical narrative and speculate somewhat as to its date and construction; all that is known and seemingly probable I shall try to give.

We find the building standing as it is today, thirty years after the arrival of the Franciscans. Just what kind of church they found at Bac is a matter of supposition; but, very likely it was similar to the original one, namely an

adobe of several rooms. One must bear in mind that it has been destroyed twice. As Bac was one of the most important missions and the most distant post, the Jesuits might have had ideas concerning a larger and more durable structure; in fact, it is very possible they laid the present foundation near the adobe church or on its very site, though the expulsion would necessarily have stopped their work.

At the time of the restoration there was an adobe ruin to the rear of the present church, believed to have been the first structure. It also comes to mind that the present monastery or dormitory wing might be the original Jesuit church, as it is of adobe while the church proper is baked brick. If the church and dormitory wing were built at the same time, why should the dormitory wing not need the same protection of heavy and well constructed walls? There might have been a second story, for a stair-way ran up from the rear of the eastern end, yet the earliest print shows the stairway covered, but no trace of a second story. Should this be the original church, the second floor might have been destroyed during the several attacks. Old prints also show the windows and doors as being arched, and a general arched entry, such as would be in keeping with simple church architecture. Not wishing to destroy the old mission, they could have built the new one against it, thus merging the work of the Jesuit and Franciscan into one. This is a popular idea, perhaps because of its simplicity. However, it is dismissing the idea too easily with merely a pretty and poetic explanation.

The old Indians today, in speaking of the mission, tell of the "black robes." For the most part they have spent the whole of their lives in its monastic shadow and their fathers helped build it, so that in their minds the good

priests are still closely connected with the structure. The Jesuits wear black robes and, true to the Indian nature, this one mark characterized the priests in their primitive minds. It is evident that in the eye of the Indian the white cord would characterize the Franciscan, and the Indian after being under his guidance for over a hundred years, would hardly speak of him as "black robe"; and furthermore, the Franciscan robe is not black but brown. Again, the Indians who have seen only one Order or, perhaps only a few passing priests, call them the "long robes." So it seems the Indians, sitting around their fires at night, told of the man in black who had come and suddenly gone; and today the old Indians stand and gaze at the great mission and whisper; "Black Robe." This tends, to some extent, to show that the mission was at least *begun* by the Jesuits.

Another striking point is that no other Franciscan mission, built under the same conditions, is cruciform in plan; San Xavier is a perfect Latin cross. Take the missions of California, New Mexico and Texas and one finds the church proper to be a rectangle. The Franciscan churches of Mexico often have a cruciform plan, but they were built not so much as missions; they were in a settled country, whereas the northern part of Pimeria Alta, at this time, was much as it was at the time of Father Kino. The only other Franciscan mission of Arizona worthy of note as a piece of architecture is Tumacácori, finished about 1800, several years later than San Xavier. In many ways it is more pretentious, but in plan it is simply a rectangle. During their period of power in Church and State the Jesuits developed fine architects and builders, while the Franciscans remained silent and unseen. As far as studied

plan is concerned, the Jesuit works are found to possess great merit, and this further tends to prove that San Xavier, which not only differs from but is better in general plan than any of the Franciscan missions, was begun by the Jesuits.

If the Jesuit building was not in some way incorporated with the present building, why should the Franciscans have retained the name of St. Francis Xavier, who was a Jesuit priest? This necessitated their giving the chief place in their altar to his figure. The Jesuits were held in general disfavor, although not, perhaps, by the Franciscans. Nevertheless, the Franciscans changed the names of other of the Jesuit missions. Another point of interest is the symbol which appears on the copper cover of the baptismal fount. It is the well known form, made up of the first and last two letters of IHΣΥΣ, the Greek word for Jesus. The symbol was often employed by the Jesuits and sometimes erroneously believed to be their accepted monogram. Over the main entrance of the fachada the Franciscans placed their coat-of-arms and, inside, their emblematic knotted cord runs all around the wall and falls in two large tassels on either side of the altar.

The only date of significance in the church, is one carved on the sacristal door: Pedro Boj^{s} ano die —1797, which put into English form is no doubt as follows: Pedro Bojorques—on a day in the year 1797. He is supposed to have been the builder employed by the fathers. Vandals have covered many of the walls and doors with their names and dates of pilgrimage, but they are as uninteresting as their owners.

The record of Arricivita brings us down to 1791, and from then on we know but little of mission history in Ari-

PEDRO BOJ.S

ANO
E17
97

THE NAME OF THE BVILDER OR "CARPENTERO" AS IT APPEARS ON THE SACRISTAL DOOR.
IT READS:
PEDRO BOJORQVES ... ON A DAY IN THE YEAR 1797.

Frent Dvell.

zona. The date before referred to on the sacristy door may be taken as the date of completion. An old Indian some thirty years ago spoke of having assisted at the dedication exercises as a child; so we reasonably may set the date as 1797. To be sure, all that is known concerning San Xavier is scant and often inaccurate; but, after several years of diligent research I have concluded:

1. That the church as built by Father Kino was of adobe and similar to the mission Guevavi; very likely it incorporated a prehistoric ruin;

2. That it was destroyed two or more times, but before the expulsion, the Jesuits laid the foundation of the present church;

3. That the foundation lay untouched for a few years and about 1783 the present church was built upon it and dedicated in 1797.

It flourished until the year 1810, when the cry of "Hidalgo" was heard all over Mexico. From then on the missions suffered either from revolutions or want of aid, until the Spanish Cortés on September 13, 1813 passed the decree depriving the missionaries of all control over their missions, which, in turn, reverted to the State, save provision of a small piece of land to each Indian family. Thus the missions were reduced to mere parish churches; and many of the missionaries left for new fields of endeavor.

In 1821 Mexico declared herself a Republic and the remaining fathers, not wishing to leave the Indians without spiritual guidance, swore allegiance to the new Government. Revolutions arose and another government appeared which the fathers would not recognize, so they were all driven out; at least, no mention is made of a Franciscan in Arizona after 1824. With them passed the missions.

San Xavier remained without a priest for many years, but was never abandoned by the Bishop of Sonora. The parish priest at Magdalena was in charge, but the Indians saw a minister of God only on rare occasions. In 1854 the United States Government purchased from Mexico the land known as the Gadsden Purchase. This constituted the northern part of Pimeria Alta, bringing the missions from Guevavi to San Xavier into the boundaries of the United States. Arizona was put in the diocese of Santa Fé, New Mexico, in 1859. The Right Rev. J. B. Lamy, then Bishop of New Mexico, sent his Vicar-General J. B. Machebeuf (who later became the first bishop of Denver, Colo.), to ascertain the condition of the missions and the state of affairs.

When the Indians heard that a priest was coming among them, they brought back the sacred articles of the altar which they had taken to their homes, to prevent them from being carried off. They rushed to the towers and rang the long silent bells, welcoming him; and they brought their children to be baptized. The good priest found that some still remembered their prayers and he was more than surprised that a few could sing Mass. The church at San Xavier was the only mission not completely in ruins, but to him we owe its preservation today. He covered the roof with cement to stop leakage, and braced the walls to prevent spreading. The Indians joyfully helped him in his work, for it was they who for years had protected the mission, as best they could, against the raids of the Apache. He could spend but a few months in Arizona, as his duties of Vicar-General called him to his Bishop. However, his favorable report was the means of a priest being sent to San Xavier again.

San José Del Tucson in 1885.

In March 1864, the Right Rev. Bishop himself came to Arizona and held visitation at both San Xavier and the new parish of San Augustine at Tucson. There was an attempt made in 1866 to start a school for the Indian children but because of limited means, it lasted only a few months. Again in 1873, a school was started by three Sisters of St. Joseph from Carondelet, Missouri. They occupied the rooms formerly used as a storehouse by the Franciscans. The teachers were very successful in their work and the Indians were beginning to take an interest in their studies when, in 1876, the lack of means was again felt and the school closed.

The need of spiritual guidance for the Indian was becoming a serious problem. Since 1824 there had been almost no organized effort to hold a priest at the Mission and most of the time it was without sign of one. The keys of the Church were entrusted to an Indian family, and every two weeks a priest from Tucson would journey to the Mission and say Mass.

The Right Reverend P. Bourgade, then Bishop of Arizona, felt the great need of religious teachers and in the fall of 1886 he offered the Mission of San Xavier to the Franciscan Order again. At that time they could not accept it because of the paucity of fathers. However, nine years later, towards the end of 1895, the Very Reverend Michael Richardt, O.F.M., provincial of the Province of the Sacred Heart, accepted St. Mary's congregation at Phoenix, Arizona, and with it the care of the Pima, Maricopa and other Indian tribes.

The restoration was begun during the latter part of the year 1906. A period of rainy weather had seriously damaged the buildings and threatened their safety. Bishop

Granjon realized the grave significance, and most nobly undertook the work. Under his personal direction the Church and adjoining buildings were completely gone over, the work being done, for the most part, by Indian labor and extending over a period of three years.

The extant portions were reinforced and the fallen portions raised from their ruins. The exteriors of the Church and buildings were entirely plastered and the front wall wisely made more attractive, its defensive character being now quite out of place, considering that it serves the gentle Papago as a house of worship.

Additional dormitory and class rooms were built from the right end of the dormitory wing and extending to the rear, thus forming a patio. A cloister was incorporated corresponding with the adjoining original one. A rear ornamental gateway replaced the long fallen defensive wall, thus enclosing the patio.

Old cuts and photographs were closely followed and nothing was added or changed except in a few minor cases demanded by necessity. So successfully was the design

and feeling of the Mission carried out, that it must frankly be admitted that it is impossible upon mere observation to distinguish just where the old work ends and the new work begins.

To Bishop Granjon, more than to any other person is due the credit that the greatest of all missions, San Xavier del Bac, stands today in its entirety.

Description.

The church faces directly south contrary to the general rule that the apse should be to the east. In view of the fact that all the supply trains and whatever visitors they might have had came from the south, the rule was dispensed with; besides, topographical conditions would not lend themselves so well to any other arrangement. To follow the description with understanding, the drawings must be referred to and the path of procedure closely followed, as the *partie* is somewhat complicated.

Let us imagine ourselves standing on the plaza before the mission. We will give it a general survey, then proceed directly to the atrium and enter the church. A systematic route will be followed: first, the church proper, then the towers, dormitory rooms, and patio, and last the mortuary chapel and its enclosure.

The mission stands on a slightly elevated position and is easily seen from distant parts of the valley. The padres had few roads to follow and the mission had to direct the way as well as beacon the distant Indian.

The fachada of the church is symmetrical, with two plain towers on either side of an ornate gabled entrance. Above the broken arch of the gable, the noble dome may be seen between the towers. The windows and doors are

San Xavier del Bac about 1897.

symmetrically placed and thrown wholly in shadow by the heavy walls. Their blackness, contrasted with the glistening whiteness of the walls, and the reddish ornamentation about the entrance make a picture against the cloudless sky and endless desert, not to be forgotten.

To the left is the mortuary chapel enclosed by a wall and separated from the wall of the atrium by only a narrow pathway. To the right is the chain of dormitory rooms and class-rooms often referred to as the monastery or the mission buildings. A wall encloses the whole of the fachada and joins the wall of the mortuary chapel with an arch over the entrance to the pathway. The wall is new and more elaborate than the original wall, which gradually fell away until the restoration. The photographs show the old wall standing in part at various times. A striking thing about the fachada is the unfinished tower to our right. Originally it lacked both dome and plaster, but during the restoration the mission and all its buildings were plastered completely and painted white. We will pass on and later go through this tower, about which so much wild speculation has been made.

Let us now cross the plaza and enter the walled atrium, which separates the church from the plaza. Here the Indians were gathered together for meetings not directly connected with the church. It was originally paved with flag stones, which gradually broke away during the abandonment, leaving the exposed ground. Strange to say, the atrium soon became literally a burying ground, the Indian reasoning that the nearer to the church he rested, the better chance he would have for paradise.

The fachada is well worth some study. Two small doors form the main entrance, while about it and high over

San Xavier del Bac. Detail of Main Entrance, before restoration.

our heads rises the rich gabled ornamentation, the one spot of display on the whole structure. It was untouched even at the time of restoration, its soft red tone still showing some traces of the original colored decoration.

The workmanship is exquisite and highly graceful. Arabesques in low relief flow over the flat field, and on each side of the entrance rise two vertical and fanciful columns of Moorish feeling, the middle ones supporting a broken arch. Between the columns are two figures in niches, without inscriptions. Nevertheless, we may quite accurately infer whom they represent. The first, above and to the left, wears a crown and a royal robe, and we may take it to be King Charles III. of Spain, under whose sovereignty the Church was built. The figure below is totally effaced.

To our right, the above figure carries a tambourine, and the attribute and appearance seem to fit St. Cecelia. The figure below is extremely interesting. Though it is now almost totally obliterated, the Indians still continue to burn candles in the niche about it, as they have done for over a century. The figure is blackened and almost a mass of candle grease. When asked the reason for their worship they tell you that the good saint cures their sore eyes. Trachoma seems to be a common ailment among the Southwest Indians today. The rest is not difficult to understand. The old Indians have handed down to their children the stories of the four personages represented, while to us they have been forgotten during the years of abandonment. The Indian continued to live about the church and retained much of his religious training, and this saint seems always to have been remembered, thanks largely to the Indian's ocular infirmity. The conditions call to mind St. Lucile, who is often invoked for eye troubes.

Statuette on Ornamental Gable, St. Cecelia. Note Tambourine.

Over the entrance is one of the three front balconies (the tower on either side having one), and above its doors is placed the coat-of-arms of the Order of St. Francis of Assisi. It consists of an escutcheon with a white ground on which are displayed a twisted cord (a mark of the Franciscan dress) and a cross on which are nailed one arm of our Savior and one of St. Francis. The arm of the Christ is bare, while that of St. Francis is covered. The meaning to be inferred is that of the union of the disciple and the Divine Master in charity and in suffering. To the right of the escutcheon is the monogram of Jesus, the Savior of men, and to the left that of the Blessed Virgin. Two ornamental bunches of grapes in the upper decoration signify the land of plenty and two small lions on either side, a symbol used throughout the building, represent the Lions of Castile. Surmounting the broken gable is what remains of a life-size bust of St. Francis of Assisi. For many years it has stood, an indistinguishable cone of plastered brick with only tradition to name it. Reminiscent of the iron barred windows of Mexico, the padres used carved wooden spindles, which are very appropriate; the balconies are also carefully made of wood. Over each of the windows in the tower is a light and charming decoration, monastic in its quiet simplicity and almost imperceptible. It reminds one of the echo of a beautiful song—a song that will never be heard again.

Let us now enter the small heavy doors into the church proper. We find ourselves at once in the nave, but in what in reality corresponds to the narthex of the basilica, where those unfortunates were placed who were not considered of sufficient purity by their good brothers, who sat, as it were, in the inner circle near the altar. However,

San Xavier del Bac. The Nave looking towards the Main Altar.

the narthex was of little use in the case of the Indian; if he came at all the padres were thankful. Directly over our heads is the choirloft and at the extreme end is the main altar. The plan is a perfect Latin cross, the transepts dividing the church into an apse and nave, and themselves forming two chapels on either side. The high arches springing from the Franciscan frieze around the wall and pilasters divide the church into six parts. Over the crossing of the transepts and nave, the dome rises on the arches and pendentives. Small benches are placed along the nave, leaving a central aisle.

The air is very cool and laden with a heavy incense. The diffused light from the high windows at first gives to all a bluish tone; but, on one's becoming accustomed to the light, a mass of color grows evident, the remains of a decoration that was once brilliant in the extreme. Even to Eastern eyes, the colors, though faded, still appear gaudy and bizarre. Of course, this holds true with many of the paintings done in a sunny land by a native people. The East is a land of grays and subtle tones, and the inhabitant develops, perhaps, a finer sense of color values than his western brother, who lives in a land of intense color. Coloring is all about him and the very mountains seem to radiate color. Anyone who has been fortunate enough to witness a mirage or even a sunset on the "Painted Desert" can well appreciate this fact. Take, for instance, the pictures of the Spanish painter Goya or his follower Zuloaga or even those of Sorolla y Bastida. Their pictures are worthy examples and the colors bold—reds, yellows and blues, and often outlined by blacks. To an eye untrained in such a school they are perhaps more novel and virtuosi than beautiful; but they are good pictures, nevertheless.

The same thought may be applied to the mission of the padres. They were imbued with the native coloring of Spain and the violent contrasts of Mexico; they built the church for savages who lived on the desert sands and whose sole expression was color. The white walls and painted statues, the profusion of gilt on the altar—all is even now beauty *ad infinitum* to him. Let us not be too critical in the judgment of a work not of our kind nor meant for us; rather, let us consider the artisan and his purpose, then determine whether or no he has accomplished his end. At any rate, to the author, the hand of time has merged and scumbled the colors until they all blend into a soft tone. The dados have almost disappeared and many of the frescoes are practically indistinguishable. The altars for the most part retain their gold-leaf, now a rich golden brown; but the vaults of the ceiling, which were said to have been so covered, are now entirely barren, thanks perhaps to unscrupulous treasure-seekers.

Let us begin at our left and go completely around the interior, examining the statues, frescoes, and other things that may be interesting. Immediately to our left is a small door which opens to the baptistry in the tower. For the time being we will pass this by and consider the small receptacle fashioned in the corner of the wall and the first pilaster. The earthen bowl is worn away by the thousands of hands dipped into its waters and it bears mute witness of the worshippers of a past century. From the pilaster springs the arch which upholds the choir-loft and from the former is projected the figure of a cherub. Passing on we come to another door which opens to the outside, and was a convenient way to the mortuary chapel. Then comes a second pilaster in which is a niche containing

San Xavier del Bac. Apse and Gospel Chapel to the left.

a small figure of St. Matthew. Many such figures will be seen, all very good examples of hand carving and evidently brought from Mexico. The drawings must necessarily be consulted at this point to ascertain the general proportions of the details with respect to the ensemble. Next we come to a large fresco of the "Last Supper." It has been darkened by time, and much of its surface has flaked off. The third, a double pilaster, which finishes one corner where the transept crosses the nave, has a niche on either side containing Saint Bartholomew and Saint Philip.

Entering the gospel chapel formed by the transept, we find two altars: the larger one at the end is very similar to the main altar and is dedicated to the Passion of our Lord, and the second, which is on the right, to St. Joseph. To the left and above is a large fresco of the Presentation of our Lord in the Temple and, below, another picturing Our Lady of the Pillar (an apparition of the Mother of God, at Saragosa). Here also stands the old confessional chair enclosed in a curtained booth.

Let us now pass on to the apse, containing the main altar. It is enclosed by a low hand-carved railing, corresponding to the elaborate metal screens found in Spanish churches in which art the Spanish excelled. On either side of the gateway is a grotesque figure of a lion, presumably guarding the altar and symbolic again of the Lions of Castile. Each held a huge wooden candle-stick, since taken away. The two double pilasters at the meeting of the transepts and apse contain on the left the figures of St. James and St. John, and on the right St. Thomas and St. Ignatius Loyola. Above, the figures of two angels of life size are hung, each holding a silken banner on which

appear the words "Gloria in Excelsis Deo." The figures are still clothed in their precious coverings and are indeed lovely to behold. They are said to be the two daughters of the artist who decorated the interior. Before us rises the main altar, dedicated to St. Francis Xavier. His crowned figure occupies the chief position and is clothed in rich velvet and linen, after the manner of the figures in Spanish and Mexican cathedrals. Above is the figure of the Holy Virgin with the statues of St. Peter and St. Paul on either side. Surmounting the altar is the figure of God, the Creator. The figures of the twelve apostles of the Catholic Church are placed about the nave in regular order, starting from St. Peter on the main altar. The group very appropriately adds St. Ignatius Loyola, the founder of the Jesuit Order, as the last and thirteenth figure.

The frescoes are worthy of our attention; to the right are "The Adoration of the Wise Men" and "The Flight into Egypt," while on the left are the "Adoration of the Shepherds" and the "Annunciation." Near the altar stand a massive table and simple bench with a low back, both preserved from the original furniture. Two fragments of the old floor may also be seen here, they wisely having been left in place by the Bishop when he directed the Restoration.

A low door beneath the fresco of the "Adoration of the Wise Men" opens into the sacristy. Here we find a square room containing a closet, formed in the massive wall for the priests' garments, and a piscini for washing the hands and sacred vessels. The ceiling is a segmental dome; parts of its decoration show it to have been one of the most beautiful spots in the whole church, the color of the flowered

San Xavier del Bac, Main Altar and Pulpit.

vault being the marvel of modern artists. A fresco of the Crucifixion, the largest in the church, appears on one of the walls. In this room were kept the sacred vessels, and from all accounts we may believe the Church was,

San Xavier del Bac. Confessional Chair and Musical Wheel.

at the time of secularization, furnished with vestments unequalled by any mission of the Southwest. This is borne out by the fact that many rare objects of great value,

once belonging to the mission, are now in the possession of residents of Arizona. For the most part, they were taken when the mission was abandoned, but to retain them still is quite inexcusable.

There are the huge hand-carved wooden candlesticks which were held by the lions on either side of the main altar; and a rare, solid silver candlestick of Spanish craftsmanship, consisting of three elephants whose raised trunks uphold the receptacle for the candle. There was also a solid silver communion service, which was taken and has never been seen since. It may be that these fine objects appear to more advantage on private buffets than on the sacred altars for which they were intended. We will let the possessors decide.

The door through which we entered is of special interest, as it bears the only date known in connection with the mission. As has been mentioned elsewhere, the name "Pedro Bojorques, 1797," appears on the sacristal side of the door. The letters are of Spanish design and cut with great care. The builder—if so he was—seems to have shown great discretion and modesty in selecting the place on which to put his mark, that peoples to come may in some way connect the simple name with the great work. Another door, on the opposite side, opens to an arched cloister enclosing the patio.

We may now return to the nave and continue along the opposite walls to the main entrance again. First, we will study the second chapel formed by the transepts, named the epistle chapel. Here also are two altars, the one directly before us dedicated to the "Mother of Sorrows" and the altar to the left to the immaculate Conception. A large wooden cross, once bearing a life-size representation

San Xavier del Bac. Apse and Epistle Chapel to the right.

of the Christ, is imbedded in the wall above the figure of Mary, the Mother. The dress covering the latter figure is a bridal gown donated sixty years ago by a young Indian woman who pledged to give to the church her dearest possession, if a certain prayer were answered. On the right wall of the chapel are two frescoes, one portraying Our Lady of the Rosary and the other, above, the hidden life of our Savior. There are many smaller statues placed about the transeptal altars of no great importance. They represent men high in rank in the Holy Orders, and each has some attribute by which he may be recognized as well as by his name painted on the base. Small cherubim in bas-relief upon the walls hold receptacles for candles, symbolic, perhaps, of the messengers of God spreading light and humility among men.

Stepping back into the nave, we pass the fourth corner-pilaster containing the figure of St. Thaddeus, the last in order of the twelve apostles. What would have been the niche for Judas, we find empty and cleverly concealed behind the pulpit. From these pilasters, formed by the crossing of the nave and transepts, spring the graceful arches that upheld the great dome. Before us stands the original pulpit, none the worse for time, and from which English, Spanish, and Papago are spoken today. The pulpit shows hand carving of excellent workmanship; and considering the tools and conditions, it is nothing short of marvelous. One must continually bear in mind the facts that the padres were several thousands of miles from the base of supplies and that most of their work was done by Indian labor. Passing along this side of the nave we find another large fresco, opposite the first one we saw on the other side, representing the Holy Ghost descending upon the disciples.

The next pilaster contains the figure of St. Simon and then we find the picture of a door painted on the wall, similar to the door directly opposite; the idea is, of course, to give symmetry to the interior. Now we come to the other pilaster from which springs the arch which supports the choir-loft, and discover it also has a well modelled cherubim formed with it. Here we find a similar receptacle for holy water and opposite the Bapistry door is a like entrance to a room, at one time used as mortuary chapel, corresponding to the same in old basilicas. We have now gone completely around the walls of the church proper.

A few details may be noted, such as the frescoes on the pendentives upholding the low vaults of the ceiling and those in the drum and dome over the crossing. The frescoes on the pendentives upholding the drum are of some interest as they picture the four Latin Doctors, St. Thomas Aquinas, St. Augustine, St. Jerome, and St. Ambrose. The dome itself is covered with paintings of various saints, few of which can now be recognized. St. Clair with the Remonstrance, St. Cecilia with a tambourine and St. Hedwich with a small church in her hand are distinguishable. The Franciscan frieze running about the walls and forming the front of the balcony, is of great interest and the detail-drawing of it should be studied. Its general motif is carried throughout the whole building in the manner of cornices, copings and capitals of columns. The mission of San José de Tumacácori, finished several years later, took over the design in its interior decoration. The Franciscan cord is the feature of the decoration and falls in two tassels on either side of the statue of St. Francis Xavier (the Jesuit, by the way), in the main altar. From the cord falls a sort of hem, representing the folds of the robe.

Along this hem are hung alternatingly the bell and the pomegranate. The vaults of the ceiling are rigid to represent shells, while the vault over the apse forms a perfect shell, springing from the altar as a center. The shell is employed throughout as one of the many forms of symbolic decoration, all of which will be taken up in the chapter on architecture.

Let us now pass to the towers and upper parts of the church. Stooping, we pass through the door to the baptistry and find ourselves in a small room, beautifully decorated. A large fresco of the Baptism of Christ appears on the wall. The room is groin-vaulted and contains the lower front window, reached by three steps. It is barred with wooden spindles and has heavy shutters opening in. Without a doubt, such construction as we have encountered was to assure safety in case of another uprising of the Indians. In the center of the room is the baptismal font, a pedestal of burned brick enclosing a copper bowl. The covering is also of copper and contains the monogram, I. H S., *Jesus, Savior of Men.* Today it is rarely used but stands worn and broken, bearing mute note of the baptisms the ragged registers record.

The stairs, built in the thickness of the walls, take us to the choir-vestry, adjoining the choir-loft. Its ceiling, too, is groin-vaulted, but the walls are uncolored; a door opens to a front balcony. The best view of the interior of the church may be obtained from the choir-loft. Here we find a few interesting frescoes of the Holy Family and the home at Nazareth, St. Francis represented as wrapt up by Heavenly love in a fiery chariot and St. Dominic receiving the Rosary from the Blessed Virgin. In the pendentives are the four evangelists with their characteristic

attributes. Around the walls are projecting beams on which seats were placed for the singers, and on the walls are painted beautifully upholstered backs. A door opens upon the balcony over the main entrance and another opens to a room similar to the choir-vestry in the opposite tower.

From the choir-vestry the stairs lead to the belfry, around which is a small balustrade and within, a seat for the bell-ringer to sit, or to rest—if he be an Indian.

Three bells make up the chime, although originally the mission had four in each tower. One of the bells is a member of the famous "lost chime" of San Juan Bautista in California. It is well cast and its inscription quite clear—S. JVAN BAVTJSTA—

The two remaining bells are poorly cast and the inscription on one is entirely unintelligible; the other inscription reads I. I. SERA XABYER A.A.D. 1807. The tone of the last two compares in no way with that of the first, but the trio, nevertheless, sound sweet, pealing over the silent desert.

A few more risers take us to the roof, but at this time let us climb the remaining flights of stairs to what we may call the cupola, which culminates in a domical vault. Here a wonderful panorama of the valley unfolds itself to us.

Descending to the roof we may walk about and then visit the other tower. Around the edge of the roof is a low ornamental parapet wall culminating at equal distances in a small decorative spire set on either side with lion heads, at one time very similar to those griffin-like figures on either side of the altar, but since replaced by others far too modern—that is, machine-made. Here one has the opportunity to study the huge dome and drum,

San Xavier del Bac. Belfry and Parapet Wall. Bell from San Juan Bautista is to the left.

rising high above the roof. The dome is interesting in many ways and compares favorably with many famous domes of the world as to artistic merit and construction. The octagonal drum contains four small fanciful windows which let fall the rays of the sun on the altar below. Crossing to the east tower, we find it exactly like the other save that it lacks a small dome, and the outside stairway from the roof is of different design. Just why this tower was left unfinished is hard to say. The brick masons did not die, for they later constructed the mission of Tumacácori, —which also, by the way, seems never to have had a dome over its single massive tower. We may give the credit for one explanation to the Indian, an excellent story-teller, who never allows the narrow margin of truth to mar a good story.

When the good fathers were finishing the last tower and the big church was nearing completion, he says, one of their number, about to apply the first brick in making the dome, lost his balance and fell to the ground. And the tower was never touched again. Such an explanation, though simple and beautiful, will not satisfy everyone. Many hold the condition arose from the lack of funds, which reason has much in its favor. The missionaries built their churches with the limited materials at hand and from the scant proceeds derived from the land assigned each mission and from their live stock. Besides, each padre received provisions from the government amounting to $300 yearly. This, to some extent, explains why the building of the missions took so long a time, but it can hardly be applied as the reason for the unfinished condition of San Xavier. It is out of the question to suppose that they would have spent the traditional fourteen years in

the building of the structure and then, when at most not more than one week's work remained, have stopped all operations. Another reason may be offered, though today often held in disfavor by the Church. Many of the great cathedrals of Europe are in a strikingly unfinished condition; and most of the cathedrals of Mexico have been left unfinished, in some part. In regard to the former, the cause may be attributed for the most part to weary abandonment. They were built at various times, over a period of several hundred years, and gradually the work was discontinued. On the other hand, tradition relates that the unfinished condition is due to the fact that church property was taxed at one time, unless unfinished. At any rate, the idea of the unfinished appearance, the unsymmetrical, became incorporated in church architecture, and even today many large churches are designed with this bit of historic precedent in mind.

To be sure, the modest churches of the padres would hardly have been taxed at any time; and if we would apply this theory to San Xavier, we must imagine the padres sincerely trying to imitate the cathedrals of their native land; hence, they left off a cupola—it was quite the thing.

As there are no bells in this tower, the stairway has been blocked up at the second floor. This gives rise to the so-called "dungeon" about which we often hear. True, it is a rather dark hole to descend into, and hundreds of bats make it all the more uncanny. One not acquainted with the plan of the structure, might well wonder upon first seeing the dark passage just where it does lead, especially as the towers and upper parts of the church are usually closed to visitors. However, both towers are exactly alike and there is no "secret" chamber.

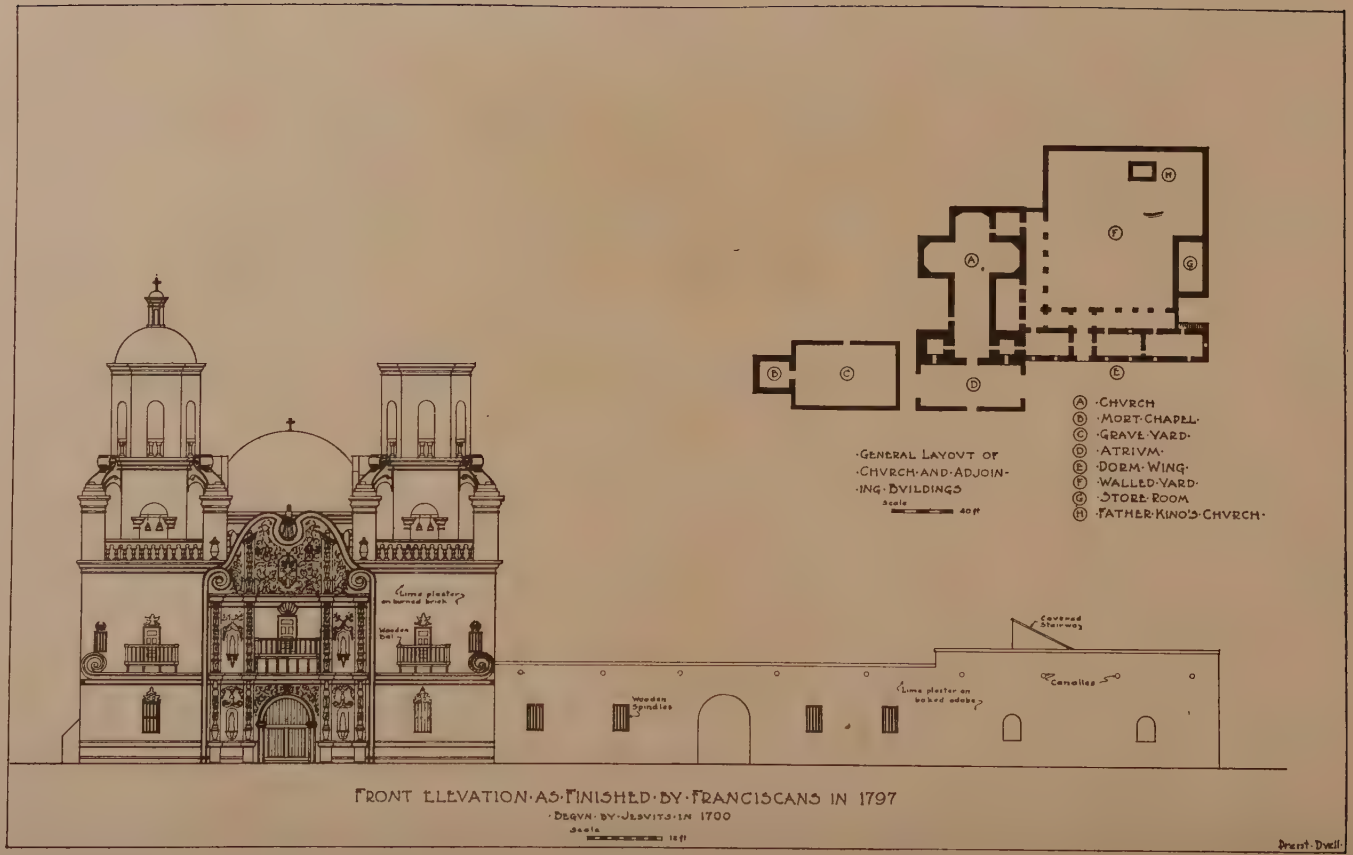
To return, we must therefore go by the way we came, that is, across the roof, down the west tower and into the nave. Now, let us enter the room opposite the Baptistry, which, bear in mind, is the first floor of the unfinished tower. It corresponds to the mortuary chapel of the early basilica and now serves as a dining-room for the Sisters. From here a passage opened through the stairway to a large room, included between the transept and the tower. It was used as a provision room, but it is now divided by a partition, the part next to the transept made into a beautiful chapel and the other towards the dining room, used as a storeroom. Both are now reached from the outside.

Adjoining the dining room is the kitchen, included in the monastery adjoining the church and extending away towards the east. At one time this dormitory feature included rooms for the priests, soap factory, stores for provisions, and several farm houses, some of them extending south and facing on the plaza. A heavy wall enclosed the space to the rear of the dormitory rooms, forming a rear yard. Here, in case of attack, the women were placed for protection while the men took their position on the near-by fortified hills.

In 1873, the dormitory-wing was repaired and turned into class rooms, while another dormitory group was built extending to the north, enclosing a patio. At the time of restoration, what remained of the old wall was replaced by one more elaborate. An arched cloister ran around the two sides of the rear court and was later extended with the new dormitory rooms.

Let us now cross over the atrium to the West side of the church and enter the cemetery. Originally the entry was in the north wall, as the old photographs show, but

San Xavier del Bac. View of the Nave from the Choir Loft.


Lime plaster on burned brick
Wooden rail
Wooden Spindles
Lime plaster on baked adobe
Covered Stairway
Canalles
A · CHVRCH
B · MORT · CHAPEL
C · GRAVE · YARD
D · ATRIVM
E · DORM · WING
F · WALLED · YARD
G · STORE · ROOM
H · FATHER · KINO'S · CHVRCH
· GENERAL LAYOVT OF · CHVRCH · AND · ADJOIN · ING · BVILDINGS
Scale
40 ft
FRONT ELEVATION · AS · FINISHED · BY · FRANCISCANS IN 1797
· DEGVN · BY · JESVITS · IN 1700
Scale
10 ft
Drexel Dyell

as the north yard was later set aside for the domestic animals, the entry was changed to its present position in the east wall. The little chapel to the west is where the bodies were kept until the ceremony of burial could be performed.

It is surmounted by a low dome with a lantern, and over the entrance rises a graceful gable-belfry in which are places for three small bells, only one of which is now in place. The chapel has since been dedicated to "Our Lady of Sorrows."

Around the walls of the yard are the fourteen Stations of the Cross, replaced at the time of restoration. All traces of graves have disappeared, but very likely many of the early fathers repose within its walls as well as in the church itself.

Architecture and Decoration.

In studying San Xavier del Bac, we are dealing with the most perfect example of mission architecture, yet how seldom is its significance realized. One hears a great deal more of the California missions, thanks to a peculiar faculty for advertising, indigenous with the "Native Son." But the popular thing is rarely the most deserving, from an artistic or architectural standpoint.

The California missions, for the most part, are charmingly without architecture; they have a decided picturesque quality that is more appealing to the painter than to the architect. The physical California cannot be forgotten. The tourist, sitting idly in the soft shade of the palm trees, contemplating the humble mission with its white walls and red roof, set against the green hills or ocean, feels that he has seen all the missions have to offer. One could hardly expect him to sit idly in the scorching sun on the

desert sands and contemplate anything. Take the natural settings from the California missions and one finds little left in the way of charm or beauty.

San Xavier, in the very heart of the desert, with nothing but sands and sage-brush about, hemmed in by distant mountains, has always attracted artists and students through its very greatness. Travelers who have seen other missions stand amazed before this great, white, isolated cathedral. Someone has said that it would do justice to Fifth Avenue, New York. Perhaps so, as an archaeological specimen, but hardly from an aesthetic point of view. It is peculiarly in harmony with the desert—a land terrible in its desolation yet subtly beautiful in its moods of color, Like all of the missions it was influenced directly by Mexico. but besides, it expresses to a marked degree, the best features of the mission style as exhibited by all the other missions. To some extent, it served as a model for the larger missions, there being relations at various times between the padres and inhabitants of the different fields. However, the missions that came later were influenced by pseudo-classicism and many grew to resemble ludicrous Greek temples as far as the fachada was concerned.

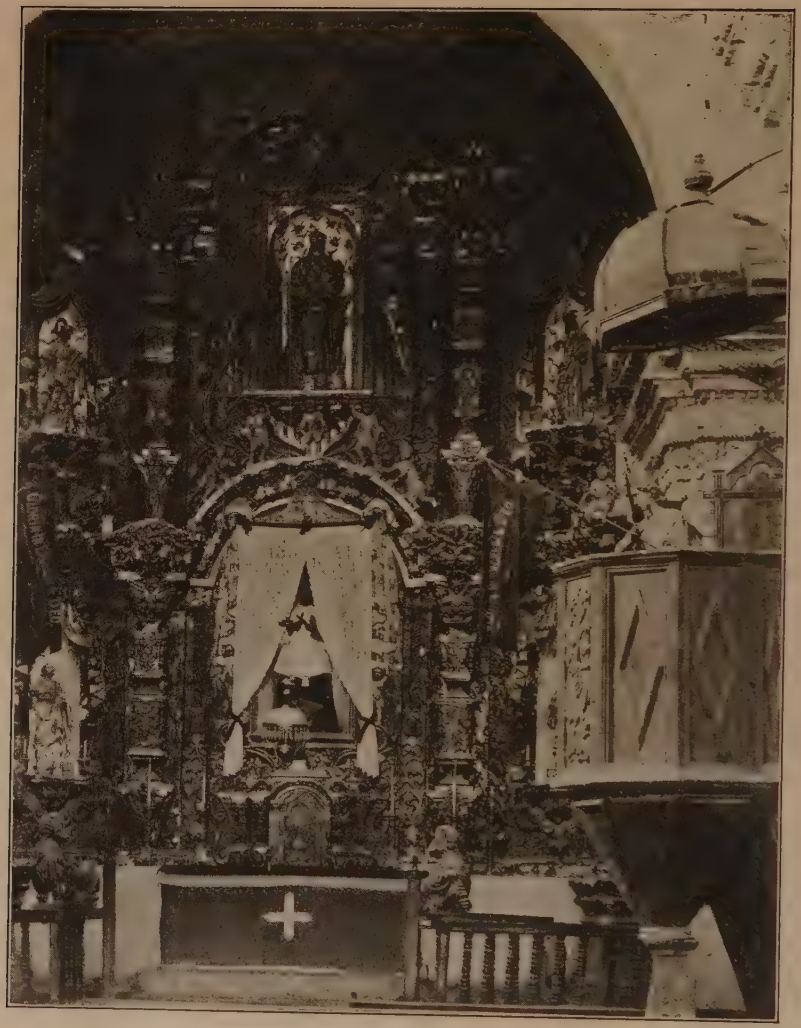
No mission excels San Xavier in serious design and pure artistry. The two admired towers of Santa Barbara fall far short when compared with those of San Xavier, and the noble dome of the latter has stood unequa'ed. San Xavier alone contains elaborate vaulting and great arches, while its cruciform plan places it in a position unique among missions. Its frescoes and ornamented altars are praised by artists today, whereas other missions were contented with a colored wall.

In general most of the missions are imbued with a de-

cided Moorish feeling. San Xavier, however, being more pretentious, cannot be designated as an example of any one style, especially when one considers the many influences then bearing upon it. Traces of the Moorish, Byzantine and basilican styles are all in evidence, but to analyze the work thoroughly is a hopeless task, as all merge into one and form a part of the mission style.

The Moor with his abstract decoration and fanciful ornamentation is perhaps more strongly felt by the casual observer. The stilted arches and elaborate Franciscan "frieze," the arabesques on the fachada and altars, and the colored dados and other parts of the walls in imitation of glazed tile, breathe his influence. At one time the ornamental gable of the fachada was colored to represent tile work, and, it may be inferred, the great dome also was a mass of glittering color. This influence was due to the native Mexican love of coloring and the complicated carving of the Aztec, which affected to a marked degree the architecture of the Spanish conquerors.

The cruciform plan is of Eastern influence, but much of the arrangement and placement of rooms is after the Christian basilica. Its monolithic form, barrel-vaults and high domes carried on pendentives may unmistakably be traced to the Eastern Church. The Byzantines cared little about the exterior of their churches; true to Eastern fashion, the inside was to them the sole object of interest. Hence, what little Byzantine influence we may expect to find in San Xavier will evidently be more strongly characterized in the interior decorations. And so we find glitter of gold and riot of color; carved statues and figures clothed in silk and linen; all somewhat bizarre and superfluous. Every conceivable wall space bears decoration, and frescoes take the place of the wonderful mosaics of the East.



San Xavier del Bac. Detail of Main Altar.

The frescoes possess real merit. They were done, tradition says, by an artistic monk of the college of Queretero, who was a pupil of Francisco Eduardo de Tresfuerras, the "Michael Angelo of Mexico." The subjects are treated in a conventional manner and show the artist to have been well acquainted with many of the great European masterpieces. The smaller decorations were done by assistants and have a primitive appearance that is not altogether distasteful. The drawing on the whole resembles that of Fra Angelico, but the coloring has the finesse of a Botticelli. The portraits of saints, figures of angels and Biblical incidents are sometimes amusingly naïve. For instance, the Virgin, who is represented as presenting St. Dominic with the Rosary, resembles more a lady of Queen Elizabeth's court; and again, Christ's home is a large two story house situated on an estate beside the sea, a house the poor carpenter of Galilee could hardly have expected to inhabit even if such were then constructed. The faces are devoid of expression and bear the same unhappy look characteristic of the wooden statues. All is touched by a childish simplicity which, perhaps, has a subtle meaning after all. They were intended for the Indian, and his first lessons of Christianity were through art; he was taught the terrible end of sinners by their agonized expression in seas of flames; and he was shown the serenity of angels on the wooded banks of quiet waters.

Behind the mere ornamentation lies a significant meaning. Everything seems to be symbolic; the symbols alone in connection with San Xavier would justify some intensive study. The shell plays an important part, signifying pilgrimage and, sometimes, baptism. Over the apse is a huge shell springing from the top of the altar, and also

above the front entrance is a shell. The two large bunches of grapes on the fachada, no doubt, refer to "the land of plenty," bearing out Father Kino's letter describing the discovered paradise. On the main altar appear stalks of wheat and clusters of grapes, signifying the body and blood of Christ.

> "And He took bread, and gave thanks, and broke it, and gave unto them, saying:
>
> 'This is my body, which is given for you.'
>
> 'This cup is the new testament in my blood, which is shed for you.'"
>
> LUKE XXII., 19, 20.

The two lions on either side of the altar and their conventional form used throughout the structure are reminiscent of the escutcheon of Castile and Leon.

The interesting Franciscan "frieze" contains, besides the knotted cord (part of the Franciscan dress), the bells and pomegranate, recalling the scriptural text:

> "And beneath, upon the hem of it, [the priests' garment], thou shalt make pomegranates of blue, and of purple, and of scarlet, round about the hem thereof.
>
> "A golden bell and a pomegranate upon the hem of the robe around about.
>
> "And it shall be upon Aaron to minister, and his sound shall be heard when he goeth in unto thy holy place before the Lord, and when he cometh out, that he die not."
>
> EXODUS XXVIII., 33, 34, 35.

The pomegranate is symbolical of spiritual fruitfulness and reproduction.

The coat-of-arms of the Franciscan Order over the en-

San Xavier del Bac. Ornamental Gable about Main Entrance.

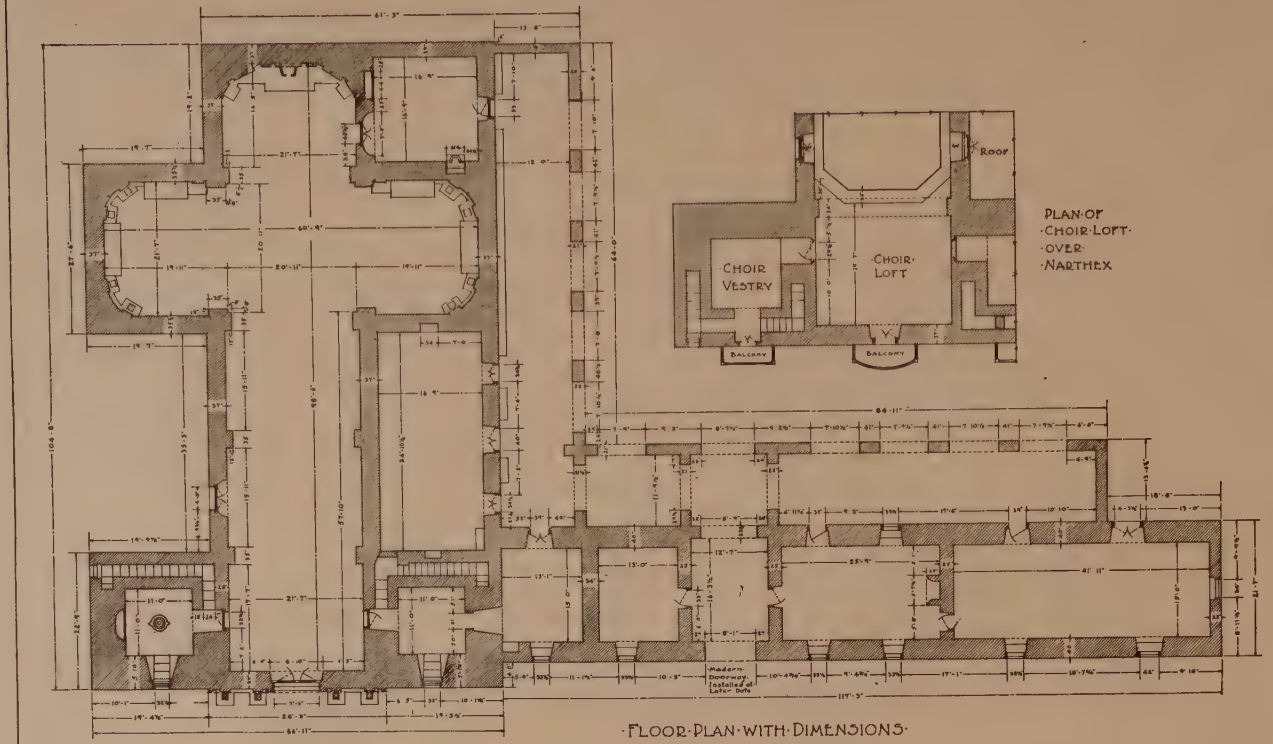
trance has been mentioned and many monograms occur throughout, of no great interest. Even the "star" window used in the drum over the crossing has some historical and artistic interest. It is said that when the Moors were employing their Christian subjects to carry out their architectural ideas, the latter cleverly incorporated the form of the cross in the decoration whenever possible, so that when forced to look towards Mecca they would behold the cross. The window is seen to be designed upon the axis of a cross.

San Xavier is interesting from any angle of observation. It has inspired artistic expression from men of many arts. Even to the casual observer, though a thing of wondrous beauty, it presents an anomaly, a paradox. It will not always be with us. Only three large missions are in use today, and time will soon claim them as it has the others. San Xavier is weakening and the great arches are badly cracked. Buttresses will be added but to no avail, and gradually the greatest of all missions will be a thing of the past.

Construction.

Every mission of any size and architectural importance usually had its special group of architects and builders, of which the community was very proud. In fact, there existed a sort of good-natured rivalry among the several missions of a "chain" in proving their artistic ability with the scant material at hand. The architect with them was the real ἀρχιτέκτων of old and not merely the designer—he was both artist and builder, and the padres, to whom fell the task, usually showed their rare ability and thorough training.

One is apt to judge the architectural and structural qualities of the missions by the work being done today.

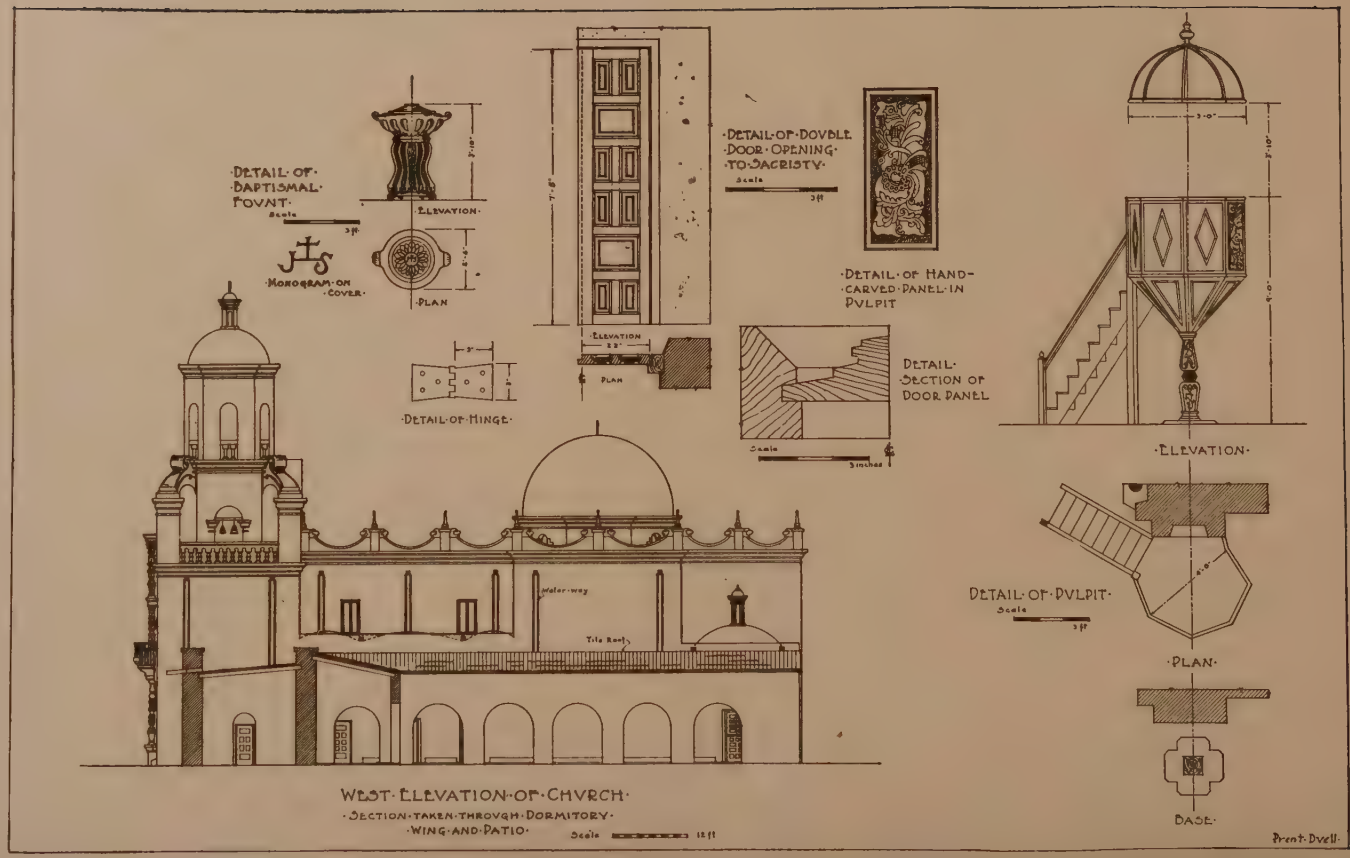


PLAN OF CHOIR LOFT OVER NARTHEX

FLOOR PLAN WITH DIMENSIONS

Scale 1/8 ft.

Arent Dvell


DETAIL OF BAPTISMAL FOUNT
Scale 3 ft
ELEVATION
PLAN
IHS
MONOGRAM ON COVER
DETAIL OF HINGE
DETAIL OF DOUBLE DOOR OPENING TO SACRISTY
Scale 3 ft
ELEVATION
PLAN
DETAIL OF HAND-CARVED PANEL IN PULPIT
DETAIL SECTION OF DOOR PANEL
Scale 3 inches
ELEVATION
DETAIL OF PULPIT
Scale 3 ft
PLAN
BASE
Water-way
Tile Roof
WEST ELEVATION OF CHURCH
SECTION TAKEN THROUGH DORMITORY WING AND PATIO
Scale 12 ft
Brent Duell

We often find the padres spoken of as uneducated men, who knew no better than to leave great blank walls of surprising thickness and with ornamentation of mud! True, their buildings are simple; there is little play of stress against stress as seen in the elaborate system of flying buttresses in a Gothic cathedral, which many people believe to be the only church architecture. But it must be borne in mind that the padres were from Spain, where, of all countries, Gothic had the least hold. For that matter, neither do we find traces to any marked degree of the Norman, Classic or even Renaissance, save a few suggestions of the latter in ornamentation. Such was not the architecture of Spain, and besides, the padres did not have huge stones or timber of sufficient size to carry out whatever other ideas they may have had. They simply had the adobe beneath their feet, small stones from the distant mountains, and trees to be felled with a few crude tools.

Their Indian workmen, though willing enough, knew nothing of building save putting up a few sticks in the ground and fastening a cover over to keep off the rays of the sun. And thus the padres found themselves handicapped and were helpless to do other than perpetuate in the crudest way the style best fitted to the limitations, and one with which they were to some extent familiar. Without a doubt, their artistic soul shrank when they viewed these simple churches and thought of the grandeur and beauty of the originals across the water.

From all accounts, we may reason they had one thousand Indian men at their disposal, but these, no doubt, proved as much hindrance as help. We may take it for granted that skilled workmen were present beside the padres themselves. Tradition of the Gaona brothers and the name

of Pedro Borjorques have been referred to, though it is not known whether they were in any way connected with the Order. Then, the padres themselves were artisans and for the most part clever artists. We may, therefore, imagine a group of well-educated men assisted by Indians as the builders of the present church. It is said the building of it required fourteen years.

The adobe was dug and made into bricks, sometimes burned in kilns on the spot. Although no traces remain at San Xavier, the kilns may still be seen at Tumacácori, though nothing more than holes in the ground.

Adobe is a heavy, plastic clay found in abundance in the Southwest and Mexico, and has been used from the earliest times as a building material. The word is probably of Arabian origin, but appears in the Mexican-Spanish vernacular as the verb *adobar*, to plaster; as the noun *adobe*, it is applied to the clay and the formed brick. Before the Spanish Conquest, the brick was made simply by mixing the clay with water, or at times with cactus juice. The *adobes* of the Spaniards are very similar except that they are strengthened by straw or grass, or even small twigs. They are laid in adobe mortar and the walls usually plastered with lime plaster, although the natives used adobe for this purpose also. The adobes used in San Xavier are of a conventional size, which seems always to have existed, namely, 5″ x 10″ x 20″.

The adobe when burned was found to make a very satisfactory brick, though necessarily made smaller, those of San Xavier measuring about 2″ x 8″ x 12″. The finished brick is of a vermilion color and its excellent quality is vouched for in the age of San Xavier as contrasted with the ruin and disappearance of the majority of missions,

nearly all of later date. The California missions, of which not more than two may be said to be well preserved, namely, San Gabriel and Santa Barbara, are for the most part stone, found near at hand. Yet they have gone, while San Xavier has stood. Perhaps "it's the climate!" Nevertheless, the Gaona brothers must be given credit as brickmakers the equal of even their progenitors.

The walls are quite straight and the angles surprisingly accurate. Considering two walls in their entirety rather than working immediately at their intersection, we find the angle is invariably within a minute of ninety degrees. As a matter of fact, so great is the accuracy found in the general construction that the plans have been drawn with T-square and triangles as one would those of any modern building. Missions as a rule are not well laid out; most of them are far from it. But San Xavier is an exception and a mission of missions.

The body of the church is made altogether of burned brick, even the upper floors and roof, including the dome. The structure is of solid brick, with a paucity of wood that is surprising. Only the doors with their frames, and the spindles before the windows, along with the three front balconies and some interior details may claim to have been part of the almost fabulous forest which once stood about.

The roof is built in the form of six low vaults about the large drum over the crossing. The great dome is one of the very noteworthy features, and is scarcely surpassed even today in workmanship. It is constructed wholly of brick and laid up without centerings. It seems incredible that such a masterpiece should have been built by the simple artisans, especially when one comes upon it unawares in the heart of the desert.

The foundation is of boulders imbedded in a sort of cement mixture and averages two feet above the grade, starting, perhaps, five feet below the surface of the ground. The stones vary from three inches to twelve in diameter and were brought from the mountains, a distance of twenty miles or so. This task was usually assigned to the women,

San Xavier del Bac. Dome and Drum.
Note the Moorish windows and segmental domes of the roof.

who carried the stones on their heads and never let them once touch the ground on their way to their destination—otherwise, the spell was broken and they would leave them and return for more. Because of the distance to the mountains, stone was used for the foundations only.

The ground floor is at different levels in the various

San José de Tumacacori, looking towards the entrance, showing the Choir Loft.

rooms, due to the structure being built on a slight hill, and the floors of the rooms afterwards leveled or filled. The floor of the church was originally made of flagstones, some of which are still preserved in the apse. At the restoration, wooden floors were laid throughout, but still at different levels.

The roof with the huge dome and also the choir loft are carried completely by arches. It has always been a question just how the arches were constructed. The plaster has remained intact, so that it is impossible to study the brick work directly, but we may reason that the arches are similar to those which we see in ruin at Tumacácori. The latter mission was copied in a marked degree from San Xavier and it is even thought that its brick work was done by the Gaona brothers. A large stone is used for the keystone and the bricks arched about it. In a few missions we find the smaller arches constructed by laying the bricks parallel and projecting one over the other until the two sides meet at the center. Trestles were, no doubt, built up within the church in the construction of the arches, as we may judge from the mention of the many trees in Kino's letter; though, of course, they have nearly all disappeared today. The story of the Pantheon of Rome has been cleverly applied to San Xavier in accounting for the height attained in building the dome and arches. Baglioni tells us how the interior of the church was filled with earth in order to reach the necessary height to build the dome. Coins had been secretly hidden in the earth and when the church was declared finished, the fact of the hidden coins was made known and the diligent Italians assiduously set to work to find the coins and thus removed the earth from the interior of the church.

Construction of Arches, San José de Tumacacori, looking towards the Apse.

The story is, however, a little far fetched in its application to San Xavier. Had the place been filled with gold the Indian would not have taken the trouble to remove it.

The pendentives and groins are all of brick, though at Tumacácori we find a backing of timber laid across the corner of the two adjoining walls.

The stairs in the towers wind about in the walls and they too are of brick. The ceiling above constantly rises to the height of a man and is constructed of specially formed bricks to allow for the individual's head. No bricks appear to have been cut or fashioned after the burning was completed. In special cases, they were all formed first in the various shapes, often really complex, and then burned in the kilns.

The plaster was allowed to "ripen" in large pits dug for the purpose, so says tradition, and the Gaona brothers, in the meantime, would work on San José de Tumacácori until called back to San Xavier.

One should note that the doors in the church-proper are the originals and are still hung on their heavy iron hinges and lock with the same huge locks and latches, exactly as when the padres left them. They are fashioned by hand from the tough mesquite wood, and held together by long iron nails. Though they have faced all kinds of weather, they seem none the worse for it. They are of a characteristic design, low and narrow, with heavy stiles and rails enclosing small panels. To some extent, this type of door was determined by the usual limited size of the mesquite tree.

Nearly all of the missions have long since lost their doors and other wood-work. San Gabriel near Los Angeles, for instance, jealously guards an old door (which, by the

way, turns on iron pivots instead of hinges) and a single window showing a few remaining spindles. San Xavier alone is fortunate in retaining today most of its wood-work.

The pulpit is a noteworthy object and displays some clever hand carving, considering the handicaps under which it was made. It is substantially constructed of pine and put together with wooden pegs. The cabinets in the baptistry and sacristy have mesquite doors, the former showing evidences of a heavy dark brown glue. A strip of mesquite wood is embedded on the edge of each tread of the stairs to prevent the wearing away of the brick, and the purpose has been remarkably served.

With respect to the metal work, little can be said. For the most part it is unquestionably brought from Mexico, especially the bells. Little use of it has been made otherwise, save as nails, hinges and locks, all of which are rather crude and hand-made. The latch on the side door of the nave shows some simple engraving.

Practically all of the ornamentation is made upon the specially formed bricks. In other words, there is no false-work; everything is solid. The main decorative feature of the interior, namely, the Franciscan "frieze," projects on the average ten inches from the surface of the wall, and is wholly of brick, none of which has been cut. The method followed was very similar to the method employed today in the setting of terra-cotta.

The altars are brick with the smaller arabesques done in plaster; a few parts are of wood such as the figures, candle sticks, and small cabinets.

The ornamental feature of the fachada is wholly of brick and plaster, and at one time was highly colored to represent glazed tile. The fantastic columns, so prevalent in

Franciscan architecture, have a small wooden core for re-enforcement.

The dormitory wing has been restored again and again until it hardly compares with the early drawings. This is accounted for by its being built entirely of adobe. The windows and doors, however, have always remained in the same relative positions, although we have seen that they were arched at one time. The two original cloisters are also of adobe and quite unsymmetrical, which adds greatly to their charm.

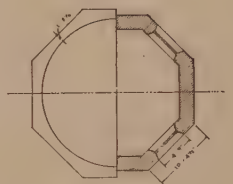
The roof over the dormitory wing and loggias is of great interest, as it has really never been disturbed, save by the addition of a super-roof of tin which serves as its protection. Most of the roofs of the missions have either disappeared in the Indian raids, from the fire which he always applied, or have fallen in through decay. The very factor of safety in the roof at San Xavier is its materials of construction,—mesquite and ocotilla—on which time leaves little mark. The mesquite timbers, about six inches in diameter, are used for beams, and across them are laid the stalks of the ocotilla. Over this form was placed soft adobe mixed with leaves and reeds, which filled all cracks and dried, forming a solid re-inforced roof. Over this, no doubt, some sort of tile was placed similar to the red clay tile found in the California missions.

The wall about the fachada and mortuary chapel was of stone foundation and burned brick, and plastered to correspond with the church. It fell gradually and at the restoration was rebuilt, but far more elaborately. The wall at the rear of the buildings was constructed in much the same way, though perhaps more substantial, because of its defensive character.

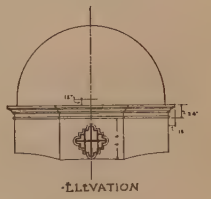
The mortuary chapel is constructed wholly of burned brick upon a stone foundation, and plastered. At the restoration it was in a ruinous state and the refuge of hundreds of bats, a fact which still remains fresh in the minds of the old residents who knew the place as children. At that time, the deserted church with its large echoing rooms filled with debris and the haunts of bats, made a lasting impression on their young minds.

The modern work, which consists of the north dormitory wing and the walls at the front and rear, is very well done and is in thorough keeping with the general feeling of the place. Brick and adobe were used in their proper place, so that one does not feel that they were "tacked on." In fact, it is a puzzle to determine just where the new work begins.

An Indian Home in the Desert.



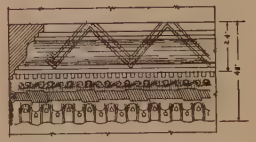
PLAN



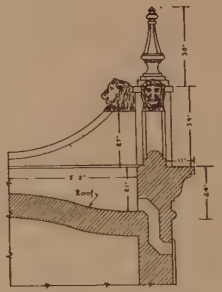
ELEVATION

DETAIL OF DOME SHOWING MOORISH WINDOW

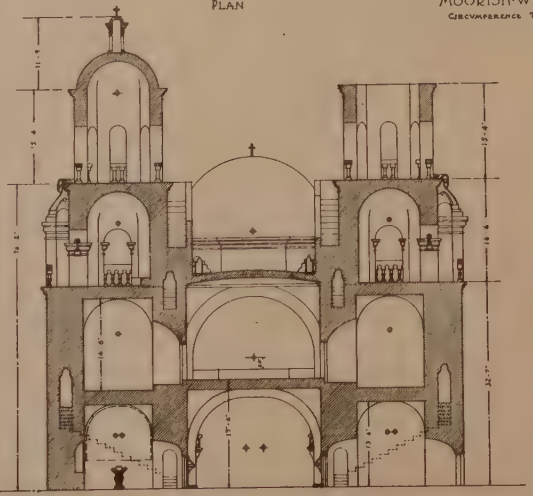
CIRCUMFERENCE 77'-6"



DETAIL OF FRANCISCAN FRIEZE SHOWING CORD AND UPON THE HEM OF THE GARMENT THE BELL AND POMEGRANATE



DETAIL OF PARAPET WALL SHOWING LION OF CASTILE AND LEON ALSO FINIAL AND WATERWAY

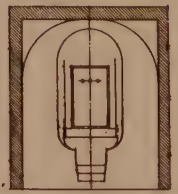


TRANSVERSE SECTION THROUGH TOWERS

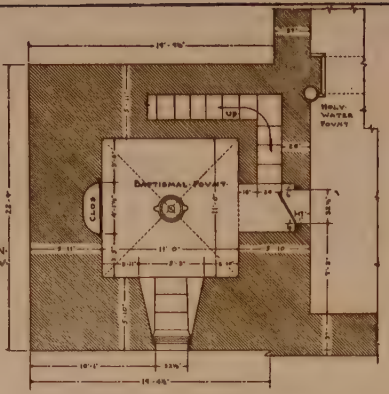
LONGITUDINAL SECTION THROUGH NAVE

Scale

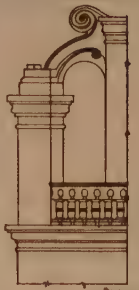
Brent Dvell



SECTION SHOWING ELEVATION OF BAPT. WINDOW

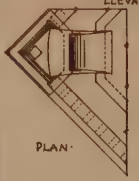


PLAN OF BAPTISTRY

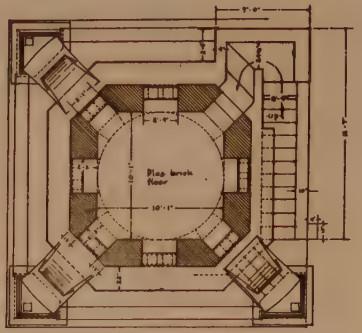


DETAIL OF FLYING BUTTRESS

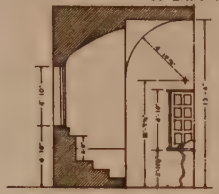
ELEVATION



PLAN



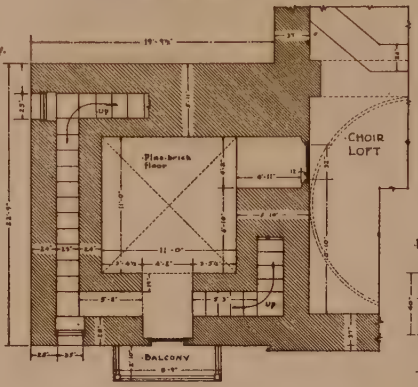
PLAN OF CUPOLA



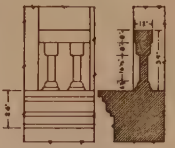
SECTION THROUGH WINDOW

SECTION THROUGH STAIRWAY

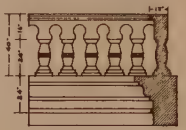
Scale



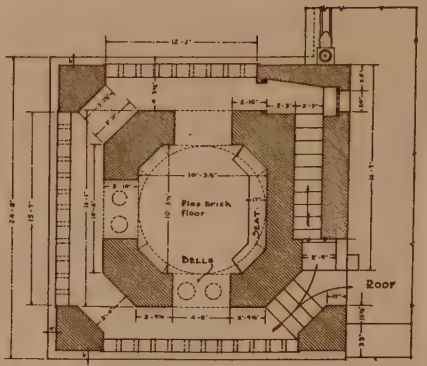
PLAN OF CHOIR VESTRY



DETAIL OF CUPOLA BAL



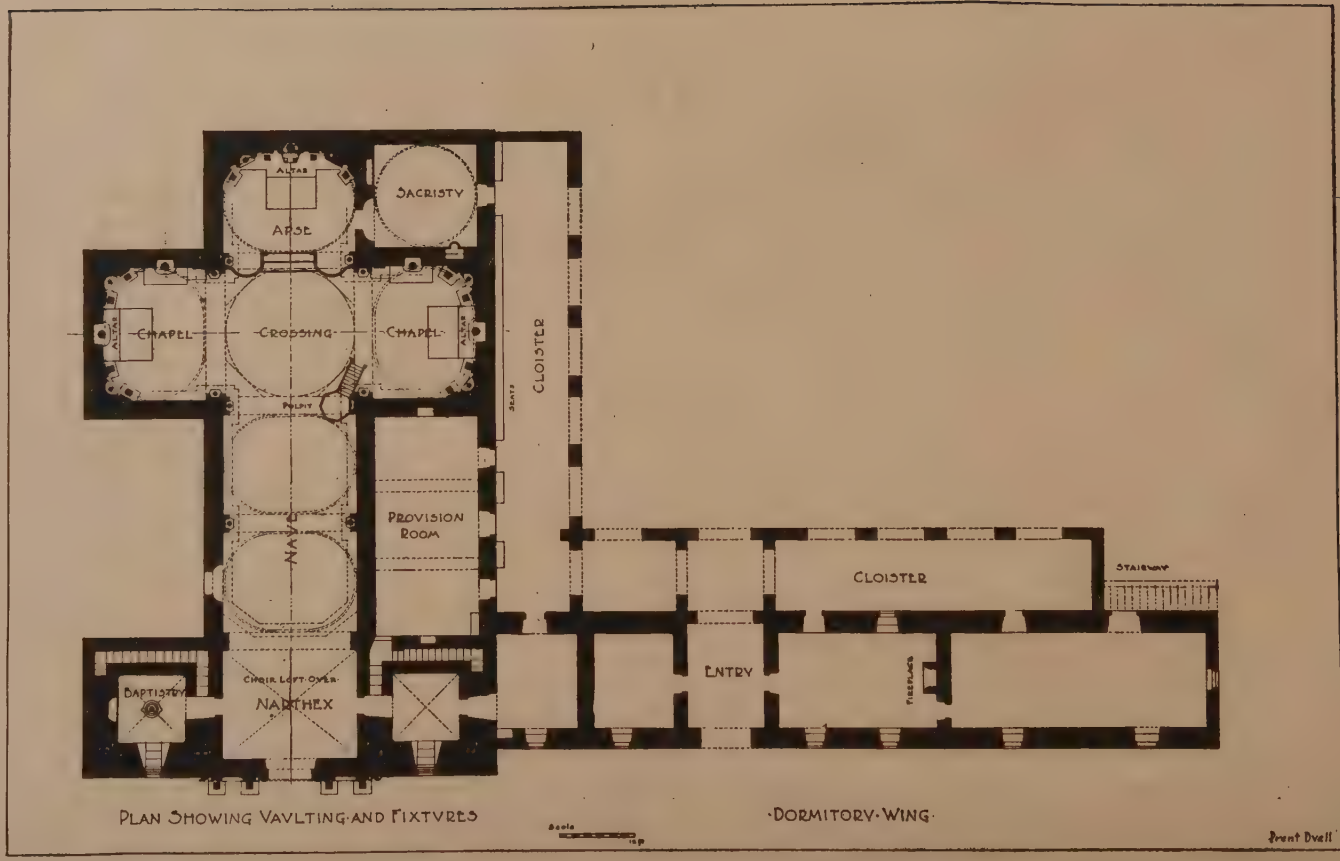
DETAIL OF BELFRY BAL



PLAN OF BELFRY

NOTE:-
DETAILED SECTIONS THROUGH TOWER AND DETAILS AT FOLLOWING SCALE

Trent Dvell



PLAN SHOWING VAULTING AND FIXTURES

DORMITORY WING

A COMPLETE LIST OF THE MISSIONS IN THE SOUTHWEST.

In compiling the list of missions, I have consulted Jesse S. Hildrup's work on "The Missions of California and the Old Southwest."

The Missions of Lower California.

From 1683 for nearly one hundred years the Jesuits labored successfully in this field, in spite of the degraded tribes of Indians and wastes of country. In 1768 the Franciscans took the field and they, in turn, were replaced by the Dominicans in 1772.

Name	Location
Loretto	On a small bay near Carmen.
La Paz	One hundred miles south of Loretto.
San José de Comondu	Sixty miles from Loretto
San Purísima Concepcion	On Pacific coast one hundred miles west of Mulege.
San Guadalupe	At Huasiuipi.
Dolores	Near La Paz.
Santa Rosa	On Bay of Palms.
San Ignacio	Near Kada Kaaman.
San Jose del Cabo	At Cape St. Lucas.
Santa Gertrude	North of San Ignacio.
St. Francis Borgia	At Adac.
Santa Maria (1767)	On thirty-first parallel of latitude, twenty-five miles west of the Gulf.

The Missions of Texas.

The Franciscans labored almost exclusively in this region.

Name	Date of Founding.	Location.
Our Lady of Loretto	1621	On Matagorda Bay.
La Trinidad	1691	On the Trinity river near town of Alabama —removed to Nacogdoches.
San Francisco Solano ("The Alamo"—not a mission in the strict sense of the word.)	1700	On the Rio Grande river and after three moves settled in San Antonio.
Our Lady de los Dolores	1715 (?)	On the Aco Bayou, near San Agustine.
Our Lady of Nacogdoches	1716	At Nacogdoches.
Our Lady of Orgnizacco	1716	On the San Jacinto river.
San José de Aguayo	1720	On the Rio Grande river, about four miles below San Antonio.
Adaes (Our Lady of the Pillar.)	1718 (?)	On the Sabine river, near Natchitoches (?).
La Bahia (Del Espiritu Santo.)	1718	At Goliad.
San Fernando (Not a mission.)	1730 (?)	San Antonio.
Concepcion La Purisima de Acuña	1731	(?)
San Francisco de la Espada	1731	On Medina river, removed to San Antonio.
San Juan Capistrano	1732	On Rio Grande river, six miles below San Antonio.

San Saba	1734	In Menard County.
San Antonio de Bexar	(?)	(?)
Our Lady of Guadalupe	(?)	Victory County (Mission Valley).

Many extensive ruins in the valley bear note of obscure missions.

The Missions of New Mexico.

The Jesuits labored faithfully in this region until 1680, when the Zuñi Indians revolted against the tyranny of the Spanish government. All the padres, along with the settlers, were massacred and the missions destroyed. A few unsuccessful attempts were made later to reclaim the field.

Name.	Location.
Quarai (1630)	Torrance.
Seneca (San Antonio) (1630)	Piros nation.
Jemez (1630)	Sandoval.
Socorra	Above Semern.
Alamillo (Santa Ana)	Thirty-one miles above Socorra.
Sevilleta (San Antonio)	Tiguas nation
Sandia (San Francisco)	Tiguas nation.
Puray or Purnay (San Bartolome)	Eleven miles from Sandia (Alameda).
Santo Domingo	Above San Felipe.
Santa Fé Villa (1609)	Eighty-one miles from San Domingo.
Tesuque (San Lorenzo)	Twenty-one miles from Santa Fé.
Nambe (San Francisco)	Thirty-one miles east of Tesuque.

Acoma (1630).....On Rock of Acoma near Valencia.
(The only mission surviving the uprising of 1680.)
San Ildefonso (1696).....Near Santa Fé.
Santa Clara.....Visita of Ildefonso.
San Juan de los Cabelleros..Visita of Ildefonso.
San Felipe (1700).....Between Lamy and Albuquerque.
Taos (1711).

Missions and Visitas in Arizona.

Jesuit Period (1690–1768).

It is impossible to arrange a complete list of the missions and their visitas in the Jesuit Period, as no exact record was kept. Father Kino placed on his map the names of many Christian settlements which ceased to exist as such, immediately after his departure. From the manuscripts and legends, along with the remains of the missions themselves, the following list can be formed. Just which ones were ranked as missions cannot be definitely determined.

Name.	Location.
San Gabriel de Guevavi (1692)?....	Northeast of Nogales.
San José de Tumacácori (1697)?....	Two miles south of Tubac.
San Xavier del Bac (1700).....	Nine miles south of Tucson.
San Luis de Bocoanco.....	Near Tumacácori.
San Cayetano de Calabazas (1694).	
Santa Gertrudes de Tubac.....	Tubac.
San Augustine del Oyaut (1699)...	North of Tucson.
San Cosme del Tucson.....	Across Santa Cruz river and to south of present city of Tucson.

San Serafin.
San Francisco.
Santa Ana.
Arivaca.
Santa Clara.....Southwest from Tucson.
Santa Catarina.....Opposite Picacho Peak.
Marvi.....Zuñi Country, northern Arizona.
Mahauve.....Zuñi Country, northern Arizona.
San Bernardino del Awatabi.....Zuñi country, northern Arizona.
Oraibi.....Zuñi country, northern Arizona.
Mashongamabi.....Zuñi country, northern Arizona.

Franciscan Period (1768–1826).

The information regarding the missions in this period is given in the "Estado Actual de las Missiones—," by Fray Antonio de los Reyes, in which he gives the description and condition of the eight missions in Pimeria Alta taken over by the Franciscans. Only two missions of the eight were in what is now Arizona; however, the complete list will be given with their visitas, for they should be considered as a group.*

In Arizona.

I. Los Santos Angeles de Guevavi. (Name changed from San Gabriel.)
  San Cayetano de Calabazas.
  San José de Tumacácori.
  San Miguel de Sonoitac.
  Santa Gertrudes de Tubac.

* The visitas are indented.

II. San Xavier del Bac. San José del Tucson (also Escala Pura—probably San Cosme).

In Sonora.

III. Santa María de Suamca.

IV. San Ignacio de Caburica.
San José de Himuris.

V. Nuestra Senora de Los Dolores del Saric.
Santa Maria Magdalena.
San José de Aquimuri.

VI. San Pedro y San Pablo Tubutama.
Santa Teresa.

VII. San Francisco de Ati.
San Antonio de Aquitoa.

VIII. Purisima Concepcion de Caborca.
San Antonio del Pitiquin.
San Juan del Bisanig.

The Missions of California (Alta).

The Franciscans labored exclusively in this field.

Name	Date of Founding.	Location.
San Diego	1769	San Diego Cañon.
San Carlos Borremeo	1770	Monterey.
San Antonio de Padua	1771	Los Robles Valley.
San Gabriel	1771	Near Los Angeles.
San Luis Obispo de Tolosa	1772	On the coast, about one hundred and twenty miles south of the Gulf of Monterey.
San Francisco de Asis	1776	On the Bay of San Francisco.
San Juan Capistrano	1776	Sixty-five miles south of Los Angeles.
Santa Clara	1777	Near San José.
San Buenaventura	1782	Thirty miles southeast of Santa Barbara.

Name.	Date of Founding.	Location.
Santa Barbara	1782	Santa Barbara.
La Purisima Concepcion	1787	On the Santa Inez river.
Santa Cruz	1791	On the Bay of Monterey.
La Soledad	1791	Between the Missions of San Antonio de Padua and Santa Clara.
San José	1797	San José.
San Juan Bautista	1797	San Benito.
San Miguel	1797	One hundred and twenty miles north of Santa Barbara.
San Fernando Rey (Rey de Espagna)	1797	North of Los Angeles, enclosed by San Fernando and Cuyhengo ranges.
San Luis (Rey de Francia)	1798	Oceanside.
San José de Guadalupe	1797	Twenty miles northeast of San José.
Santa Inez	1804	About forty miles northeast of Santa Barbara.
San Rafael, Archangel	1817	North side of San Francisco Bay.
Chapels		
San Antonio de Pala	1816	Visíta of San Luis Rey.
San Francisco Solano	1824	
San Miguel	1803	Visíta of Santa Barbara.
San Miguelito	1809	Visíta of San Luis Obispo.
Santa Isabel	1822	Visíta of San Diego.
Santo Domingo		Visíta of San Diego.
Los Angeles	1822	
San Bernardino (Politana)		Visíta of San Gabriel.

Ruins of an obscure chapel exist in the San Margarita Valley, in San Luis Obispo County.

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